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VOL. XXIX NO. 8

AUGUST 1966

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How to provide recreation—today's most-wanted sales extra in housing projects . . . Are you offering buyers and renters what they really want in house and apartment kitchens? . . . Yes, you can get design flexibility in low-cost housing . . . Best-quality air conditioning: It costs less than you think

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WASHINGTON WIRE

Tight money recognition

Commerce Dept. gave its first official confirmation that tight money was hurting housing in announcing a disappointing June showing. Private nonfarm starts touched an annual rate of 1,264,000 units and total starts for the first half of 1966 trailed 1965 by 5%. Biggest disappointment: building permits slumped 14% to a 941,000unit rate, lowest since 1959.

There is "no doubt" tight money is to blame, said Commerce spokesmen.

Housing goal? NAHB President Larry Blackmon has called for HUD to set a national housing goal of 2,275,000 starts annually. The goal would be first step toward asking Congress for more aids to reach the target, once established. So far, the idea hasn't been discussed much by the Johnson Administration.

Anti-bias bill President Johnson's anti-bias housing bill, part of a civil rights package, faces opposition both subtle and overt. To win support from the House judiciary committee, normally a moderate to liberal group, the President had to agree to limit the bill's impact to housing professionals, mainly builders and realty brokers. Traditional Southern objectors are being joined quietly by many Northern Congressmen who fear upsetting the suburban status quo.

Make no small plans

Vice President Humphrey had to journey to Capitol Hill to help twist some arms for the Administration's demonstration cities bill. It squeaked through the House banking committee virtually intact, with no price tag, but it still faces some high hurdles before being approved. The House will vote on the bill piece by piece-it contains everything but the kitchen sink, including bonus renewal credits totaling \$100 million to 19 cities. Many Congressmen are unenthusiastic and are still smarting in their campaigns just for voting for rent supplements. But the Administration is pressing for the big package because it fears losing enough seats in this fall's Congressional election to make a full-scale bill improbable in 1967.

The proposed \$25-million loans to newtown developers are back, sans any controversial reference to economic (i.e., racial) mixing.

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New money: \$1.8 billion saving bank starts national FHA-mortgage buying

The decision by the Dime Savings Bank of Brooklyn* is the best news in six months for the builders and mortgage bankers caught in a tight-money squeeze since December.

The bank has historically confined its \$1.4-billion mortgage portfolio to direct mortgages and a few brokered loans, all in the New York metropolitan area and surrounding counties. Reversing policy, the Dime will now buy FHA loans from the rest of the country, and a new source of money will become available to much of the homebuilding industry.

The Dime needed a higher yield than that available in New York, where its direct mortgage lending was crowding the state's 6% usury ceiling. Yields on FHA 203b residential loans purchased in the national secondary market have risen to a 6.10-to-6.32% range, and the pressure is still upward.

Other bank money. And some "scatter buying" of mortgages has now developed among a few other New York savings banks, which had been virtually out of the FHA market for months for lack of cash. The money comes from amortization payments, and purchases are usually in mere \$1-million lots, but they may signal an intention to resume extensive buying if savings flows turn sharply upward.

* Its assets of \$1.85 billion are second only to those of its Manhattan neighbor, Bowery Savings, with \$2.2 billion.

The Bowery Savings Bank in New York has made some funds available to mortgage-banking servicers to support them at the current market price of 93 with 3/8 % servicing.

"It's too early to ring any bells," warns Senior Vice President August M. Strung. "But there is some validity to a theory that the market will ease a little bit, and I must emphasize the little bit, as we get past the July savings squeeze. Prices and yields will remain steady but some money should become available."

Pension fund purchases. Builders are also hearing good news from another front. Executive Officer Bill Leonard of the Associated Homebuilders of Greater Eastbay is getting excellent response to a campaign to bring California's pension-fund money into mortgaging (News, July). Leonard chided the big California State Teachers Retirement Fund for sending its millions to the New York bond market when the New York State Teachers Fund was busy buying California's FHA mortgages at higher yields. A day later he received letters from three of the nine California fund trustees promising a policy reappraisal.

Leonard also announced that California's 46-county Carpenters Pension Fund, investing at the rate of \$1 million a month. will put the full amount into mortgages. It had been placing 65% in other instruments.

The labor union purchases are small, but they may well represent the tip of an

HOMEBUILDER'S MORTGAGE MARKET QUOTATIONS

orted to HOUSE & HOME in work

	FNMA Scdry. Mkt.×y FHA-VA	Discount	Sec. 203b paid by builder * 30-year Immed.*	FHA 207 Apts. Firm	Comm. banks, Ins. Cos.	Convention Loan Rates Savings banks, S&Ls		Construction Loan Rates
City	53/4	53/4S	Trend	Commit.		80%	Over 80%	All lenders
Atlanta	6	6	Up 1	a	61/2	61/2	61/2	7+2
Boston	5	par-1	Up 1	a	61/4-61/2	6-61/4	61/2	61/2
Chicago	51/2	5-7	Steady	5-51/2	61/4-61/2	61/4-61/2	61/4-61/2	61/2+1-2
Cleveland	51/2	6-7	Up 1	5-51/2	61/2	61/2	61/2	7-71/2+1-2
Dallas	6	6-8	Up 1	a	63/4	63/4	63/4	7+1
Denver	6	6-7	Up 11/2	a	61/2-63/4	63/4	a	63/4+1-2
Detroit	51/2	5-8	Up 11/2	a	61/4-61/2	61/4-61/2	61/4-61/2	63/4-7+1
Honoiulu	6	61/2-8	Up 11/2	a	63/4-7	7-71/2	a	7-8+1-3
Houston	6	51/2-71/2	Up 11/2	a	61/2	61/2-63/4	61/2-7b	61/2-7+11/2-2
Los Angeles	6	6-61/2	Up 1/2	a	63/8-63/4	63/4-7.2	a	61/2-7+11/2-3
Miami	6	6-8	Steady	a	61/2	61/2	63/4	61/2+1-11/2
Newark	5	5-6	Up 1	5-6	6+1	6+1	6+1	61/2-7+1 and 2
New York	5	3	Steady	6	6+11/2-2	6+11/2-2	6+11/2-2	61/2-7+2
Okla. City	6	5-7	Steady	5-7	61/2-63/4	61/2-63/4	61/2-63/4	61/2+2
Philadelphia	5	5-7	Up 2	а	6	6	6	61/2+1
San Fran.	6	6-7	Up 1	5	7+1-11/2	7+1-11/2	7+1-11/2	7+21/2
St. Louis	6	51/2-8	Up 11/2-2	a	6-63/4	63/4-7	63/4-7	61/2-7
Wash., D.C.	51/2	5-7	Steady	a	6+3-4	а	а	61/2+2-21/2

Immediate covers loans for delivery up to three months, future covers loans for delivery in three to twelve months. Quotations refer to prices in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones. Quotations refer to houses of typical average local quality. 3 % down on first \$15,000; 10% of next \$5,000; 25% of balance.

of balance. Footnotes: a—no activity. b—limited activity. w—for com-parable VA loans also. x—FNMA pays $\frac{1}{2}$ point more for loans with 10%. y—discounts quoted are net after seller pays $\frac{1}{2}$ % marksting fee and $\frac{1}{4}$ % adjustment for stock purchase. Seller must pay 1% of mortgage for stock calcu-lated in \$120 units, of which \$20 is contribution to FNMA capital and \$100 is for a share trading at about \$84. z applies to 66% loans

Sources: Atlanta, Robert Tharpe, pres., Tharpe & Brooks Inc.; Boston, Robert Morgan, pres., Boston 5¢ Savings Bank; Chicago, Robert H. Pease, pres., Draper & Kramer Inc.,

and Robert H. Wilson, pres., Percy Wilson Mortgage & Fi-nance Corp.; Cleveland, David E. O'Neill, vice pres., Jay F. Zook, Inc.; Dallas, M. J. Greene, pres., Southern Trust & Mortgage Co.; Denver, Clair A. Bacon, pres., Mortgage Investments Co.; Detroit, Sherwin Vine, vice pres., Citizens Mortgage Co.; Honolulu, H. Howard Stephenson, vice pres., Bank of Hawaii; Houston, Everett Mattson, vice pres., J. Bettes Co.; Los Angeles, Christian M. Gebhardt, vice pres., Colwell Co.; Miami, Lon Worth Crow Jr., pres., Lon Worth Crow Co.; Newark, William W. Curran, vice pres., Franklin Capital Corp.; New York, John Halperin, J. Halperin & Co.; Oklahoma City, B. B. Bass, pres., American Mortgage & Investment Co.; Philadelphia, Robert S. Irving, vice pres., First Pennsylvania Banking & Trust Co.; St. Louis, Charles A. Keller, vice pres., Mercantile Mortgage Co.; San Fran-cisco. John Jensen, vice pres., Bankers Mortgage Co. of California; Washington, James C. Latta, sr. vice pres., Fred-erick W. Berens Inc.

iceberg. They signal organized labor's intention to re-examine its investment policy, always oriented toward bonds. Leonard's campaign is probably the most significant development in California housing finance this year.

NAHB says the California and Dime moves are the only bright spots in an otherwise bleak savings picture. When June housing permits nosedived 14%, NAHB summoned 400 of its policymakers to an emergency meeting in Washington.

President Johnson pledged "we'll do everything we can to expedite" Congressional approval of a temporary lid on bank and s&L interest rates. The U.S. S&L League has balked at controls, called "the best thing that can be done" by Johnson.

Savings inflow. Some relief is evident in the savings picture. The nation's savings banks gained \$200 million in deposits in June and preliminary figures indicated that New York's banks, at least, were doing

NAHB GETS OUT OF CDs

Builder President Larry W. Blackmon and Executive Vice President Nathaniel Rogg have shifted NAHB's operating funds into FNMA and Home Loan Bank Board debentures "so they help the mortgage market."

Last spring NAHB invested some funds in commercial bank certificates of deposit (NEWS, July) but it moved out of the controversial CDs as they expired. At the suggestion of some members of its board of directors, the association began putting its new funds into the newly created FNMA and HLBB debentures. Their 5.6% yield is higher than the highest $(5\frac{1}{2}\%)$ return available on CDs.

well in July as a result of an increase to 5% in savings dividends.

The 6,200 savings and loan associations gained \$455 million in May to reverse

Tight money spurs an upsurge in remodeling industry

While tight money afflicts the new-home market, lenders appear to have all the funds needed for home-improvement loans. The reason: Improvement loans yield 9.4% to 10.4% vs. 5³/₄% for prime business loans and up to 7% for mortgages; what's more, commercial banks, which now have more money available than savings banks and s&Ls, have always been more attuned to consumer lending.

The remodeling surge shows in a gain in the first five months of the year in the number and amount of FHA Title One property-improvement loans, the first such gain in recent years. The number of loans was up about 5% to 187,819 while dollar volume gained nearly 10% to \$249 million.

Another significant factor is a hefty year-to-year gain in the total of repair and modernization loans held by financial institutions in April 1966, latest date available. The Federal Reserve Bulletin reported \$3,602 million in loans held at that time—up \$114 million, or 3%, in a year.

In New York City, Executive Director Edgar V. Hall, of the National Home Improvement Council, says the dominant factor is the tight mortgage market: "Substantial amounts of home-improvement money are available at the higher remodeling rates." He also notes the dropoff in new-car sales, which, he says, "makes more money for such fields as remodeling lending."

Aside from the financial factor in the new trend, Hall cites increased competition between fuels, with electric utilities seeking more electric-heat sales in the conversion market. As a result, he predicts, "utilities are going to be competing more strongly . . . and their emphasis will be more in the direction of remodeling since new home starts are dropping off."

Improve instead of move. Even when a homeowner bent on upgrading can find mortgage money to move, its higher cost —perhaps a 6% to 8% discount on an FHA loan—may persuade him to improve his old house instead.

Hall notes that the remodeling industry is seeking to take advantage of this situation by channeling potential homebuyers into the improvement market: "Remodeling publicity and promotion will now remind the homeowner of an alternative to building or buying a new home."

New look. Los Angeles Research Analyst Sanford R. Goodkin suggests that builders take a new look at the booming renovation and remodeling market.

Surveys indicate national expenditures of \$14 to \$18 billion for renovation in 1966, he says; sales of roofing, siding, and insulation materials alone for home improvements will pass \$1 billion.

Goodkin urges small-volume builders in particular to turn to modernization of older homes.



NEW YORK CITY BANK HAS FIXUP MONEY

April's loss of \$646 million, and some of the gain translated into money for mortgaging. The industry expected another increase when June's figures were in and an even better showing in July, the first month under the Home Loan Bank Board's authorization to raise savings rates to attract deposits.

Victory in California. The entire nation had been concerned about California's s&Ls during the first ten critical days of July, the post-dividend period when savings often move about in quest of higher rates. But the big s&Ls raised their own savings dividends to 5¹/4 on passbooks and 5³/4 % on three-year bonus accounts. Home s&L and Lytton Financial Corp., which led the movement, showed big savings gains for the period and, while the first-week savings for all 204 state-chartered associations did decline slightly, the loss was less than onethird of the drop in the same post-dividend period in April.

And a recent Pittsburgh study shows that one of three small homebuilders (one to nine houses a year) does home-improvement work as well. The evidence suggests small builders faced with a money shortage for new houses might have additional profit opportunities in the improvement field.

Dodge economist foresees a rebound in starts

The lone challenge to the almost universal predictions of gloom and doom for housing comes from Economist George A. Christie, of the F. W. Dodge Co., division of McGraw-Hill Inc.

Christie has just taken a second look at the last half of 1966 and now predicts "some modest improvement in the fourth quarter."

He expects 1,425,000 housing starts this year, 100,000 fewer than his original estimate but only 4% below the 1965 total. By contrast, NAHB forecasters in 83 major cities now see an 11% drop for the year.

Reasons Christie: "The conditions which gave rise to the spring mortgage crisis may let up just a bit so that more funds will be available, at a price." But he warns: "Homebuilders will still have to live with a difficult money market in the latter half of 1966."

Christie says demand would have supported 1,525,000 units this year, so the cutback of 100,000 units "is the real impact of credit restriction."

He predicts more stability in the mortgage market for two reasons: "Total demand for funds will advance more slowly than in the extraordinary first quarter when the mortgage well ran dry. And, simultaneously, some return to a slightly higher, more normal rate of saving by consumers will make more funds generally available." Geramic preserves through the ages the beauty and utility of man's creations.

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Nonprofit housing '66: a boomlet with tough months ahead

At first glance, it seems that all the ingredients of a boom in nonprofit, low-rent housing are here at last:

• The rent supplement program has enough money to provide 20,000 moderate-rent units—equal to the output of all FHA middle-income apartments last year.

• Nonprofit groups, even national churches, are again pushing hard to sponsor low-rent housing.

• And more and more limited-dividend companies are being formed, (graph right) a sure indication that the building industry has learned how to snare the profits available in nonprofit housing.

But a closer glance reveals some imminent dangers—such as a lack of sites and ever tighter money—which could turn 1966 into a year to forget. Nevertheless, if nonprofit housing continues to boom, the building industry will face its largest new market since 1948, when William Levitt uncorked the moderate-priced, suburban market. And the builders who move into the nonprofit market now will be at the ground floor.

Builders can enter the market either by building for a nonprofit sponsor and drawing a 10% building profit or by forming a limited-dividend (profit) company to manage its own project for 20 to 40 years at a yearly profit of 6% on equity. And they can chose from among six housing programs for the elderly, handicapped, or poor.*

Foundation-sized housing. Nonprofit housing stands to get a boost as the character of nonprofit sponsors shifts from local groups to foundation-sized organizations such as national churches.

That shift has been spurred by Urban America Inc., a private, nonprofit planning group (see p. 18). Last year Urban America helped local sponsors plan 3,000 units by providing technical consultants without charge. Too, the Ford Foundation, which got the program started with \$575,000, has earmarked \$2.2 million to put Urban America on the road to promoting 30,000 units a year.

With expansion imminent, Urban America will begin to administer a new \$1million effort supported by four huge Protestant denominations to stimulate large-scale construction. The churches— United Church of Christ, Episcopal Church, Presbyterian Church of the U.S.A., and Methodist Church — will pledge \$50,000 each for two years. The remainder will be supplied by the Ford Foundation.

Urban America also hopes to lend "seed money" to budding development corporations, which in turn can marshall local





men and money to build low-rent housing. Thirteen such corporations in towns from Baltimore to Omaha have already been promoted by Urban America.

Another expanding nonprofit group, the Foundation for Cooperative Housing, will sponsor 6,000 units during the fiscal year ending September 30. FCH, which specializes in racially integrated cooperatives, has 130 projects planned, including 14 seeking rent supplements. Its activity has increased by 20% annually.

Togetherness. Nonprofit housing will also get a boost from closer government cooperation with nonprofit groups.

FCH is about to begin a joint program with the Office of Economic Opportunity despite earlier rebuffs. An FCH staffer will be assigned by OEO to work with potential local-housing sponsors.

Urban America wants to create offices near the six regional offices of the Housing and Urban Development Dept.

In New York State, Governor Nelson A. Rockefeller (R.) has just signed a law providing \$10 million in seed money to nonprofit-housing sponsors. It could become a prototype for other states.

On the tough side. For every promised boost there are emerging threats that could bury nonprofit housing.

Inexpensive sites on the fringes of central city ghettos are critically short. One church leader in riot-scattered Watts has searched for a site for a year.

And when and is found for \$2 a sq. ft. or less, hostile city leaders often shelve needed zoning changes. One would-be sponsor in the Philadelphia area has lost three sites, says New York Consultant William H. Horner of Horner, Nelson, Schneider & Assoc.

Even with a suitable site, nonprofit and limited-dividend sponsors face a special problem—tight mortgage money. Tight money prevented some of FCH's 40 builders from packaging projects this year. And FHA isn't helping matters by setting low mortgage limits— $5\frac{1}{2}$ % with a 2% service fee. Discount points must be certified.

A soft-spoken churchman, Larry Upton of the United Church of Christ, charges that some FHA district staffers are prejudiced against integrated housing and churches that try to build it. And churchsponsored projects account for 25% of FHA multi-family applications. Policy makers at FHA deny the charge.

Consultant Horner adds that some FHA staffers have a negative attitude toward all nonprofit sponsors: "The staffers learned that they don't get medals for approving good projects, but they can get drummed out of their jobs for approving a bad one. As a result, they tend to reject every application until a higher-up in FHA or a politician gets them off the hook by interceding in behalf of the sponsor." That practice, Horner says, often discourages sponsors.

Horner adds: "FHA shouldn't be afraid of a few foreclosures. This is social-risk housing, and if the churches are willing to take the risk, FHA should be, too."

Others say FHA is moving applications slowly simply because it is taking a longer look at each potential sponsor. "They are looking three times where they never looked before," says one sponsor.

The main problem in processing applications is that FHA can't tell the good guys from the bad—the legitimate packager from the fast-buck operator. Belatedly, FHA is seeking a solution by requiring full disclosure of each sponsor's past performance (see p. 12).

Limited-dividend companies face a special problem with FHA, which seems to favor nonprofit sponsors in the rent-supplement program. The first 11 sponsors chosen by FHA were nonprofit groups—though applicants were split 50-50 between limited-dividend and nonprofit groups.

Says Builder Walter Winchester of Boston, who heads a limited-dividend company: "The government is trying to make the rent supplement program palatable so it can get broad-based support." He adds that if the trend continues, FHA will be ignoring the more productive builder in favor of less efficient nonprofit groups.

Builder's choice. A builder can profit in two ways from nonprofit housing. He can build for a sponsor and get out of the project fast. Or he can create a limiteddividend company to manage the project and earn long-term profits that are virtually tax free. But there are serious disadvantages to each:

Building for a sponsor. Builders have learned that building for an inexperienced sponsor—even a church—can be hell.

Nonprofit groups do almost everything wrong, according to Joseph McGrath of Urban America's nonprofit assistance division, which was formed to advise inexperienced sporsors. McGrath says:

• Nonprofit groups inevitably delay

^{*} Sec. 231: FHA mortgage insurance for elderly housing; Sec. 202: direct loans for elderly housing; Sec. 221 at or below market rate interest: mortgage insurance for elderly, handicapped or poor; Sec. 213, insurance for cooperatives. Rent supplement grants can go to sponsors of Sec. 221d3 at or below the market rate, Sec. 231, or Sec. 202 projects.



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Divisions and Subsidiaries of Rusco Industries, Inc.

AUGUST 1966

things. Reason: unwieldy committees.Their leaders sometimes ignore the

best source of advice.
They often aren't accustomed to facing the responsibility that comes with a \$2million mortgage.

• They often are reluctant to spend any of their own money.

• They sometimes mask deep apathy behind a veneer of enthusiasm.

To be successful, a builder must know how to size up nonprofit sponsors. Robert C. Boucher of Denver's Mortgage Investment Co. has been doing just that for ten years. He is one reason Denver pioneered some housing projects for the elderly that are still doing well today. Here's how Boucher looks at a church:

1. How big is the church? Boucher prefers a church with 1,000 members or more. At that size, it probably has support from a cross-section of the business community, plus an active woman's group to provide sympathetic care for tenants.

Can the church itself support the project financially? Boucher studies the church's record in raising funds for overseas missions. "A housing project is a mission in itself," he says.
 Are all the members enthusiastic?

3. Are all the members enthusiastic? Boucher demands a binding public vote on the project by the church members. He also asks the ministerial staff to spell out its motivation for the project in a letter. And he keeps the church involved by refusing to help it rent up the project.

Running a limited-dividend company. It takes special care—and some luck—to produce a project that any builder is willing to live with for 20 to 40 years. Two builders who have—Harvey Coleman of Park Ridge, N. J. and Walter Winchester of Boston—stress these requirements.

1. A downtown site. This means the builder may have to use sites bypassed by others. Winchester put one two-story project on piles.

2. A town big enough to support the project. A town of 50,000 generally can support a 150-unit project, the smallest project Coleman and Winchester suggest.

3. Construction costs that do not outrun local income levels. Coleman surveyed Rhode Island and decided the income levels were too low to support the higher mortgage demanded by local construction costs.

4. Non-restrictive local construction codes. A fire code in Milford, Conn., would have added a disastrous 10% to Coleman's costs.

5. A level trend of local taxes. Coleman won't build in a town that doesn't have a level or declining tax rate over the last ten years.

6. Management capable of close supervision. Coleman learned that lesson when FHA fined him \$20,000 recently for allowing ineligible tenants to rent 40% of the units in one project. "FHA didn't give us enough information in the beginning," says Coleman. "And some of the families lied to us about their income; others broke up faster than we could count them."

A mayor's drive for better housing comes too late to avert race riots

In his one year as mayor of Omaha, A. V. Sorensen has done more to improve housing than the previous administration did in four.

Sorensen—a retired millionaire industrialist who donates his mayor's salary to a Boys Club—first sat down with Robert C. Weaver, then head of HHFA and now secretary of the Housing and Urban Development Dept., to find out how quickly low-cost housing could be built outside Omaha's ghetto.

Then, with help from Urban America Inc., Sorensen formed a local development corporation to stimulate construction of nonprofit housing. He won a \$250,000 cash grant from the Eppley Foundation and a promise of another \$250,000 from local businessmen.

Within eight months, the corporation was waiting for FHA approval of its first 100-unit project and actively planning five others.

But it was too late. On a sultry July night with temperatures in the 90s, riots erupted in a Negro slum of one- and twofamily houses. When sporadic rioting ended two days later, 122 persons had been arrested, 20 stores were damaged, and Mayor Sorensen had doubled his efforts to improve Omaha.

After a series of meetings with Negro leaders, he attacked the main grievances-



Four-bedroom houses take over Pittsburgh's market

One of the few depth surveys of a metropolitan housing market hints at what could be a national trend. It shows (*chart, above*) that houses with four or more bedrooms have more than doubled their share of Pittsburgh's market in the last six years and should account for 47% of the city's 7,000 starts in 1966.

The annual survey of Pittsburgh builders (238 this year)—made for Action-Housing Inc. by Housing Economist Uriel Manheim—also revealed that conventional construction is rapidly gaining favor over off-site fabrication. Of the builders report-



Pat Hall, Omaha World-Herald

OMAHA's SORENSEN After sleepless nights, a rest

slum housing, poor recreation facilities, and inadequate job opportunities. Sorensen turned a local YMCA into a job headquarters and continued to work around the clock to ease the underlying "frustrations and tensions" that triggered the rioting. At week's end, the mayor announced he would press for state enabling legislation to let Omaha ban race bias in housing.

Then, the 61-year-old mayor entered a hospital to rest from the job he doesn't need—but that needs a man like him.

ing, 81% build conventionally—up from 56% in 1961. Other findings:

• Only one out of 15 buyers in the past year was newly married.

• Prospects are looking for glamour, omitting what the builders call real quality.

• Large-volume builders (50 units or more) dominate the market. Of 143 builders who put up 2,783 houses, only 20 accounted for 64% of the total.

Crawford hopes to upgrade Inland Homes prefab line

"Buying upward is today's trend," says W. Hamilton Crawford, new owner of Inland Homes Corp. of Piqua, Ohio. "They [Inland] stayed in the low-cost market too long. We'll broaden the line and upgrade."

Inland's four plants manufacture houses selling from \$9,000 to \$25,000, but many go at \$10,000 to \$12,500. Revenue was \$4.6 million, off 28%, and net was \$101,922, off 74%, last year. Inland lost \$82,718 in its April quarter.

Crawford is president of Crawford Corp. and Crofton Corp., which is building the new town of Crofton near Washington. He bought control of Inland from the estate of Co-founder Eugene E. Kurtz. Why?

"They have been in absentee ownership since Mr. Kurtz died in 1964," says Crawford. "I can give them a shot in the arm."

THE HOTTEST BUILDER ITEM FOR '66!



Front and rear sections with panels removed.

Yes, to the builder who is constantly looking for new merchandising features, WILLIAMSON's new "Five-In-One" Yearound Indoor Climate Control Console should prove to be the hottest home feature for 1966.

Smartly styled and handsomely streamlined, the new "Five-In-One" is a furnace, humidifier, cooling/dehumidification unit and electronic air cleaner completely enclosed in a single casing. Best of all, the new "Five-In-One" costs less and takes less space than a combination of comparable capacity elements purchased as separate units and assembled into a total comfort package.

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CHICAGO'S SOUTH COMMONS PROJECT



PITTSBURGH'S 148-ACRE PENN PARK

Three new approaches to urban renewal

They were announced in Oakland, Chicago, and Pittsburgh, and each is an ambitious experiment in its own right.

Oakland: The Beneficial Development Group-Sproul Homes syndicate closed a \$1.7-million deal, buying a coveted 34.5 acres in the Acorn Project from the city's redevelopment agency. Plans call for a \$15-million, 900-unit development, including 860 townhouses and a shopping center. Most units will be rented (\$90 to \$145 a month), but some will be co-ops.

Sproul's participation marks a rare entry of a one-family-housebuilder into urban renewal. It is the first of Oakland's efforts to attract smaller residential builders into renewal. Contracts will be going out shortly to from ten to 20 builders to renovate the 200-acre Oak Center Project, an area of run-down Victorian homes adjoining the Acorn land.

Chicago: McHugh-Levin Assoc. launched an imaginative venture in social and economic integration with its 1,406unit South Commons project (*photo, left*). The \$20-million development is said to offer the widest price range of any urban renewal housing in the country: 670 upper middle-income units (in 22-story and five-story buildings) will rent for \$112 to \$350 a month; 330 units (one high rise plus four-story townhouses) will rent for \$95 to \$175 a month; and 72 townhouses will be sold for \$30,000 each. McHugh-Levin bought the 30.6 acre site from the city for \$1.07 million.

Pittsburgh: The Pennsylvania Railroad revealed a plan to tear down and rebuild a drab 148-acre industrial area, transforming it into a model downtown business and residential district (*photo, right*). The project, six times larger than Pittsburgh's famed Golden Gateway, will be financed by the railroad. Final plans and costs aren't in yet, but the estimated cost of land alone is \$40 to \$50 million.

Cleveland revamps renewal—at last

When hostile critics complained of something rotten in federally sponsored urban renewal, it was often with nose downwind from Cleveland's renewal program. And since 1961 when the city was first allotted \$16.2 million for its 885-acre University-Euclid project, the conduct of administrators has given the critics ample opportunity for howls of protest.

One example came in a May report by the U. S. General Accounting Office, made at the request of Rep. Charles A. Vanik (D., Ohio). In the core of Cleveland's renewal area, the festering Negro slum called Hough, the GAO came up with these findings:

• Rehabilitation work, to have been finished by 1967, is only 12% completed.

• Not a single new residential unit has been started. Original plans have been cut from 1,693 units to 1,229.

Even as the GAO report was being written, the city's urban renewal department was reorganized under a new director, Barton R. Clausen. But the sins of the forebears continued to return.

Still another blow came then from an unexpected quarter—the Cleveland hearings of the U. S. Commission on Civil Rights. To the embarrassment of the federal Housing and Urban Development Dept. (HUD), the most poorly kept secret in the city finally received official recognition: for three years, in direct violation of renewal regulations, Cleveland had not enforced the housing code in Hough. Ugly charges were aired that the city ran buildings down purposely to lower their sale value at demolition time.

Stung by the findings and fearing a wholesale smear of urban renewal, HUD Secretary Robert C. Weaver resorted to an extraordinary move: He threw an investigative task force into Cleveland and last month (together with Clausen and Mayor Ralph S. Locher) came up with a short-term, 16-point program to salvage the city's renewal program. To give Cleveland a new start, the city must:

• Incorporate rehabilitation standards into its renewal program by November.

• Correct housing-code deficiencies and enforce the code vigorously.

• Begin intensive rehabilitation by September and demolish 50 vacant cityowned buildings this month.

Even as work began, the ghetto erupted: Hough was torn by two nights of riots that left two persons dead. It took 1,600 National Guardsmen to restore order.

Next on the labor agenda: a guaranteed workweek?

A complex proposal that contractors guarantee 1,600 hours of work yearly to unionists surfaced last month as Labor Secretary Willard Wirtz's answer to wage inflation in the building industry.

Contractors aimed a volley of criticism at details of the Wirtz plan, but Wirtz stood firm. Seasonal building work, he insisted, must be spread throughout the year.

Wirtz regards the hire-in-summer, firein-winter pattern of many U.S. builders as a luxurious habit they can no longer afford. He is already asking U.S. agencies to space bidding for building and highway contracts over 12 months instead of bunching them in the spring. New technology and building methods have made obsolete reluctance to build in winter, he argues.

By his new prescription, Wirtz clearly aims at countering labor's argument that union tradesmen need hefty hourly wage settlements to make up for the seasonal pattern of their work. Settlements last year averaged 3.9% vs. 3.2% guidepost.

To rescue the crumbling guidepost, Wirtz stepped into a bitter New Jersey contract dispute after contractors and Operating Engineers Local 825 had agreed upon a 9% hourly wage hike in January. For three months he and New Jersey Labor Commissioner Raymond Male probed the seasonal pattern of building before making their proposal last month.

They called upon contractors to guarantee 40 weeks—or 1,600 hours—of work to union members who had worked more than 700 hours in the industry the previous year. Employers would pay 20ϕ hourly for each manhour worked to finance a new development corporation that both parties would set up. When work slackened, the development corporation would undertake a wide range of public projects and thereby provide new jobs.

But contractors object that the development company might become a public company competing with themselves.

A developer's past is now prologue with FHA

To smooth the welts raised by brickbats from Sen. John Williams (R., Del.), FHA now requires builders, investors, consultants, and apartment packagers to tell all about their past experience with the agency when seeking mortgage commitments. Specifically, they must give details of any mortgage defaults in previous ventures.

Using General Accounting Office reports, Sen. Williams had shown that some FHA district offices had insured apartments sponsored by persons or groups who had defaulted on other projects in other areas.

Sen. Williams, meanwhile, accused FHA of losses "far greater than they are admitting publicly" on foreclosures. In the last six months of 1965, he charged, FHA lost \$3,328 per unit on 4,491 resold apartment units and \$2,909 per house on 24,073 resold houses. He said FHA lost 45% of its original mortgage amount on apartments.



The new look in homework,

(it's called the snooze)

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Holiday Innkeepers show way for Medicare-center builders

Two Midas men from Memphis who made their Holiday Inns this country's top motel success story have now begun building medical care centers. Because Wallace E. Jonnson and Kemmons Wilson have seldom been known to bet on losers, builders interested in profitable new ventures will surely pay heed.

Homebuilder Wilson put up the first Holiday Inn in Memphis in 1952 after a cross-country auto trip left him dismayed with the state of the nation's motels. In 1953 he entered partnership with Johnson, a small-house mass producer already widely known as "that prayin' millionaire from Memphis." By 1965 their Holiday Inns of America Inc. was earning \$4 million a year on \$74 million in gross revenues from 587 inns.* As a further testament to its success, it had imitators in virtually every state.

Now the two friends have organized Medicenters of America to build convalescent shelters that will care for inpatients between hospital exit and normal life reentry. The program is one of the first big construction projects to provide facilities for use under the Federal Health Insurance for the Aged Act, and Medicenters

*Or \$1.13 per share on 3,494,854 shares, which traded from 29¼ to 43¾ on the New York Stock Exchange during the first half of 1966.

How Advance Mortgage raised profits in a poor loan market

"We priced defensively to avoid the possibility of loss," explains Advance's president, Irving Rose. "We accepted the risk of losing volume to do this.

"We've never been out of the market and we won't be. We'll take any mortgage in any of our markets anywhere at the right price."

The big Detroit mortgage banker fifth in national ranking with \$836,133,-000 in servicing—set records in profit from operations despite the least favorable mortgage market in its 27-year experience. Earnings for the year ending April 30 were \$601,199, or 85ϕ a share, compared to \$523,053, or 74ϕ a share a year earlier. Volume in mortgages closed was actually down—\$208,328,843 compared to \$210,214,291. The company opened two new offices, now has 17.

Building stocks. Under the impact of tight money, HOUSE & HOME's monthly index of 74 building stocks dipped from 6.83 to 6.52. Several s&L issues gave up a full point, among them the First Charter and Financial Federation holding companies on the West Coast. The averages:

Building	5.46	5.15	5.45
Prefabrication	2.78	2.48	2.34
S&Ls	7.93	7.67	7.20
Mortgage banking	11.92	11.20	10.35
Land development	7.26	6.94	6.47
Average	7.18	6.83	6.52



WILSON and JOHNSON

is expected to produce a blueprint for builders interested in taking advantage of the Medicare legislation (NEws, Sept. '65). Because the company will be the general contractor for up to 400 licenseeowned centers, it will have to become a builder of major proportions.

California to Boston. Four licensed Medicenters, with 346 beds, are already in operation in Houston, Tex.; Santa Clara, Calif.; and Wilmington and Winston-Salem, N. C. Four others, with 345 beds, are being built under license commitments in Columbia, S. C.; Lewisburg, Tenn.; Hopkinsville, Ky.; and Evansville, Ind. Licensed centers, with 517 beds, are planned in six more locations, and deposits have been received for another 29 subject to feasibility studies.

But Medicenters Inc. wants to build and operate four centers of its own, and that will cost \$5,250,000. It will offer 150,000 shares of stock at \$10 a share, the rest of the money in mortgages.

"The company anticipates that substantial additional debt and equity financing will be required from time to time," Medicenters says. It lists equity at \$749,268, with 305,000 shares outstanding. It has posted no earnings results for the four licensed centers now operating.

The first company-owned center will be a six-floor facility with 270 beds in the Memphis Medical Center Project. The four-acre site alone will cost \$477,000, or about \$1,800 a bed.

A center with 186 beds will go up in Nashville, Tenn., and another with 248 beds in Boston. The fourth location, for 186 beds, is undetermined.

Lease terms. The company's standard license fee is \$100 a bed or \$5,000, whichever is greater. Medicenters takes 3% of the revenue received by the licensee.

Medicare will pay the major part of "extended care" up to 100 days for elderly persons after three days' hospitalization. Centers will serve younger patients too.

HOUSING'S STOCK PRICES

	July 11	Chng.
	Bid/	Prev.
COMPANY	Close	Mon.
BUILDING		
BUILDING		
· Adler-Built Inc	1/4	
· Capital Bld. Ind		+ 66
Cons Bldg. (Can.)	1.35	+30¢
. Dev. Corp. Amer	7/8	- 1/4
Edwards Inds	13/8	*******
Eichler Homesh	. 3	- 1/2
· First Hartford Rlty		- 1/8
First Nat. Rlty.o		+ 1/8
• Frouge		
General Bldrs.b		- 1/4
Kavanagh-Smith		
Kaufman & Bd.b		- 13/8
	A RECORD	
Levittb		+ 1
Lou Lesser Ent.b	. 33/4	- 1/8
Lusk	. 5¢	-10¢
Pres. Real. A.b	. 103/4d	- 1/4
· Sproul Homes	. 11/4	- 1/8
U.S. Home & Dev	. 1	+ 1/4
Jim Walterc		+ 1/4
Del. E. Webbe		- 3/8

PREFABRICATION

Admiral Homes Albee Homes	3/4 1d	-	1/8
 Continental Homes 	31/8	-	1/8
Gt. Lakes Homes Inland Homes ^b	41/2d	-	1/2
Modern Homes	23/8		5/8
Natl. Homes A.g	31/8		1/8
• Nationwide Homes	13/4 4d	+	11/8
 Scholz Homes Seaboard Homes 	1/8		1/8
Steel Crest Homes	4	+	1/4
Swift Industries	2 ^d		

S&Ls

American Fin 143/4	+ 1
Calif. Fin.c 4	-
Columbia 5	
mpire Fin 45/8	- 1
quitable S&L 131/4	-
Far West Fin.c 61/2	- 1
Fin. Fed. ^c 131/4	- 1
First Char. Fin.c 123/4	- 1
irst Fin. West 41/4	-
irst Lincoln Fin 63/8	+
irst Surety 27/8	-

3/4 3/8 3/4 5/8

1/2 1/8 7/8 \$10-100

\$200 and over

Source: Fed. Reserve Board, April.

	COMPANY	July 11 Bid/ Close	Chng. Prev. Mon.	COMPANY	July 11 Bid/ Close	Chng. Prev. Mon.
4 · · · · · · · · · · · · · · · · · · ·	First West Fin.e Gibraltar Fin.e. Hawthorne Fin. Midwestern Fin.e. Imperial Corp.e. Trans-Cst. Inv. Trans-Cst. Inv. Union Fin. Union Fin. Cal.e. Wesco Fin.e	$\begin{array}{ccccc} & 111/2 \\ & 61/2 \\ & 63/8 \\ & 55/8 \\ & 3 \\ & 51/2 \\ & 23/4 \\ & 63/8 \\ & 63/8 \\ & 65/8 \end{array}$	$\begin{array}{c} - & 7/8 \\ - & 1 \\ - & 3/8 \\ - & 5/6 \\ + & 1/8 \\ - & 5/6 \\ + & 1/8 \\ - & 3/8 \\ - & 3/4 \\ - & 3/4 \end{array}$	Christiana O. ^b Coral Ridge Prop. Crawford Deltona Corp. ^b • Disc Inc. Fla. Palm-Aire Forest City Ent. ^b Garden Land Gen. Devel ^b Gulf American ^b Horizon Land Laguna Nig	$\begin{array}{c} \cdot \cdot 5^{1/2} d \\ \cdot \cdot 15 \\ \cdot \cdot 2^{1/2} d \\ \cdot \cdot 11^{1/2} \\ \cdot \cdot 2^{1/4} d \\ \cdot \cdot 2^{1/6} d \\ \cdot \cdot 1^{1/6} \\ \cdot \cdot 1^{1/6} d \\ \cdot \cdot 1^{1/6} \\ \cdot \cdot 1^{1/6} d \\ \cdot 1^{1/6} d$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
8 8 9 3 3 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	MORTGAGE BANK Advance • Amer. Mort. Ins. Associated Mtg. Charter Colwell Cont. Mtg. Inv. • Cont. Mtg. Inv. • FINMA First Mtg. Inv. • Kissell Mtg.b Lomas & Net. Finp MGICb • Mortg. Assoc. • Southeast Mtg. Inv. United Imp. & Inv.	$\begin{array}{cccc} & 65/8^{\rm d} \\ & k \\ & 61/4^{\rm d} \\ & 21/4 \\ & 81/2^{\rm d} \\ & 251/2 \\ & 45/8 \\ & 711/2 \\ & 123/4 \\ & 41/8 \\ & 31/4^{\rm d} \\ & 241/2 \\ & 41/4 \\ & 73/4 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Lake Arrowhead Major Rity MoCulloch Oil ^p So. Rity. & Util.b Sunasco ^c a—stock newly ad closing price ASE NYSE. d—not trad g—closing price MS PCSE. k—not ava Wallace Investment: Diego Imperial Cor in averages. x—ac split. y—tender off	$103/4$ 35ϕ $93/8$ $31/4$ $181/2$ ded to to ti. c—clos ed on da SE. h—clo tilable. p s. q—for p. •—no ljusted fo	sing price te quoted. osing price formerly merly San t included
2	LAND DEVELOPME All-State Prop • American Land Am. Rlty. & Pet.b., Arvida Atlantic Imp Canaveral Intl. ^b	26¢ 1 37/8 7 171/4 ^d	$ \begin{array}{r} - & 6 \acute{e} \\ $	Sources: New Yo Gairdner & Co., Nat ities Dealers, Philip Saxe, American St York Stock Exchar Exchange, Pacific C Listings include on derive a major part housing activity and	ional Assn o Beer of ock Exchange, Midv oast Stock ily compa of their in	ange, New vest Stock Exchange, nies which nicome from
4 3	Percent interest and LOAN SIZE	(net chan New Y	ge) in year ork City	LOAN RATES 7 other Northern & Eastern cities	& Wester	
	\$1-10	5.92	(+.30)	6.10 (+.25)	6.23 (-	.21)

5.66(+.56)5.34(+.72) 5.82(+.56)5.46(+.61)



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AIREA'S FENTON "We must unite"



SREA'S HORTON "Recognize the residential specialist"

Appraiser groups smoke peace pipe to end house valuation confusion

For more than 30 years, lenders and builders wanting a house valued have been able to pick between an M.A.I. appraiser (Member of the American Institute of Real Estate Appraisers) or an S.R.A. appraiser (a Senior Residenital Appraiser who belonged to the Society of Real Estate Appraisers).

Last month the two trade associations began talking amalgamation to clear away the confusing verbiage. Observers gave the move a good chance to succeed, largely because both association presidents—Harry R. Fenton of AIREA and Edward B. Horton Jr. of SREA—favor ending the division.

The associations appear to have hurdled the stumbling block in previous merger efforts—how to classify persons qualified to appraise only houses. Fenton's Institute ended a time-honored shibboleth and agreed to admit "residential affiliates" who specialize in houses; M.A.I.s continue as appraisers of industrial and commercial property as well.

Horton's Society, an outgrowth of house appraisers for savings and loan associations, said "the anticipated recognition of the residential specialist as a professional in his own sphere alongside the broader-based appraiser" created the climate for union.

But amalgamation could provide an unexpected dividend: stronger enforcement of ethical standards for appraisers.

Appraisers have been taking their lumps recently; demand for appraisers is high and "the practice is now attracting those jackals who smell good fees," stated the Institute's Horton in opening talks. Disclosure of fraudulent valuations to obtain inflated mortgage loans last year (NEWS, Feb., May '65) has spurred drives to license appraisers in some states.

Prefabbers shuffle top staff job

J. A. Reidelbach Jr., a six-year veteran staffer of the Home Manufacturers Assn., resigned last month as HMA executive vice president.

He announced no immediate plans but indicated his long affiliation with both the home manufacturing and construction industries would keep him close to the general building field in some formal capacity. Reidelbach, a registered professional engineer, was HMA technical director before taking full charge in 1963.

HMA directors named **James L. Dooley** of Louisville as his successor. Dooley, who assumed his duties immediately, has been active in public relations and trade association membership development and services.

HMA President **Ralph Lester** of Continental Homes is aiming at quadrupling HMA membership from its April level of 50 companies, and Dooley's recruiting experience will aid this drive.

Lester reports membership is continuing to expand and expects to reach his goal by next July.

To spur the drive HMA cut its dues schedule and adopted new bylaws to open active membership to component makers as well as firms manufacturing complete house packages.

ASSOCIATIONS: Charles M. Nes Jr., FAIA of Baltimore, is new president of the American Institute of Architects. The Denver convention that elected Nes voted to favor the Johnson Administration's plan for demonstration cities now before Congress.

Dr. Saul B. Klaman has been elevated to vice president and chief economist of the National Association of Mutual Savings Banks. Dr. George Hanc succeeds Klaman as research director.



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NEWS

GOP Home Loan Bank Board seat opens as deLaittre departs for MBA

The White House is searching for a Republican to occupy a key minority spot on the three-member Home Loan Bank Board, supervisory agency of the nation's \$130 billion s&L industry.

The vacancy opened when John deLaittre, a member since 1962, told President Johnson he did not seek reappointment when his term expired June 30.

DeLaittre will become executive vice president of the Mortgage Bankers Assn. Nov. 2, succeeding **Samuel E. Neel.** Neel, the association's general counsel for 14 years, took on the extra chore of executive vice president in the spring of 1965 until a permanent staffer was chosen.

No stranger to mortgage lending, deLaittre, 57, was president of the Farmers and Mechanics Saving Bank in Minneapolis before joining HLBB, and 1959-60 president of the National Association of Mutual Savings Banks.



REPUBLICAN deLAITTRE Stepping down as an S&L watchdog

A Harvard-trained lawyer, de-Laittre stirred controversy a year ago by suggesting in a Los Angeles speech that lenders might hold builders to a 30-day inventory of unsold houses (NEWS, April '65). The warning came too late to prevent overbuilding in California (*see p. 82*).

UA discord: Lash out, Slayton in

The unceremonious resignation of James E. Lash last month from the executive vice presidency of Urban America Inc. surprised everyone, most of all his successor and close friend, William Slayton. But suave UA President Stephen R. Currier wasted no time on niceties in explaining the change as a personality and policy conflict.

Purred Currier: "It was in the cards that we'd have to have a new executive and a new look at the field. Mr. Lash felt his services were superflous." ("Also," he added, leaving a foot of room to read between the lines, "there was another conflict.")

Lash's walkout revealed the not entirely harmonious rumble of policy realignment that had been going on since last December when Urban America was formed by merging two civic groups (NEWS, Feb.). Action Inc., founded 12 years ago and led by Lash since 1956, was oriented to immediate improvement of physical facilities and was heavily supported by businessmen. The American Planning and Civic Assn., a 61-year-old group supported by foundations, architects and city planners, had much broader esthetic and theoretical aims, encompassing the problem of environment and future problems of urban living. Patently, the foundations and city planners prevailed in the policy scramble.

Said Currier: "We have a very different and larger program here than Action's." Said Lash: "I am interested in what . . . private business can do . . . to solve urban problems and improve urban amenity."

Slayton's star rose as quickly as Lash's fell. Quitting his maligned job as director of the Urban Renewal Administration only last March to formulate an idea center for UA, he was quickly named Lash's replacement.

With the reorganization nearly completed, UA will be moving the bulk of its activities to Washington, with the particular aim of working closely with HUD. UA's local development services division will use its million-dollar budget to release "hundreds of millions more" in federally insured mortgages and interest and rent subsidies. UA's magazine, *Architectural Forum*, will remain based in New York.

Slayton is currently organizing UA's upcoming national conference on urban problems, called "Our People and Their Cities." At this conference, to be held in Washington Sept. 11-13, Currier will formally announce the revamped policy of Urban America.

DIED: **George H. Knott,** 60, who built *The Mortgage Banker* magazine from a newsletter to the respected journal of the Mortgage Bankers Assn. in 31 years as editor, June 25 in Chicago.



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BUSINESS IN THE MAKING

HOUSE & HOME presents locations, sponsors, architects and estimated costs of representative new projects costing over \$500,000 as gathered by ENGINEERING NEWS-RECORD and F. W. Dodge Co., division of McGraw-Hill Inc. to alert builders, lenders and contractors to new business.

CALIFORNIA—CHULA VISTA: 150 houses, \$2.2 million. Builder: Dass Construction, San Diego. Plans: Henry F. Bugenhagen, La Jolla. DAIRY VALLEY: 66 houses, \$1.5 million. Builder: Suburbia Inc., Santa Ana. Plans: Kermit Dorius, Corona Del Mar. DANA POINT: 52 houses, \$1.3 million. Builder: George Meeker Construction, Arcadia. FOUNTAIN VALLEY: 120 houses, \$2.6 million. Builder: Luxury Homes, Anaheim. Plans: Noegle & Molone, La Jolla. FULLERTON: 100 houses, \$2.2 million. Builder: Luxury Homes, Anaheim. Plans: Noegle & Molone, La Jolla. LA JOLLA: 60 houses, \$2.5 million. Builder: Dunham Moreau Development, San Diego; Apartment complex, \$2 million. Sponsor: Dr. J.P. Cole, c/o Tucker, Sadler & Bennett Inc., San Diego. La MESA: 89 houses, \$1.5 milion. Builder: Pardee Construction, Los Angeles; 60 houses, \$2.4 million. Builder: Dunham Moreau Development, San Diego. Los ANGELES: 112 houses, \$2.2 million. Builder: Sauffer & Bennett Inc., San Diego. La MESA: 89 houses, \$1.5 milion. Builder: Pardee Construction, Los Angeles; 60 houses, \$2.4 million. Builder: Sauffer & Benaett Inc., San Diego. La MESA: 89 houses, \$1.5 milion, Builder: Pardee Construction, Los Angeles; 10 houses, \$2.2 million. Builder: Kaufman & Broad Building. Plans: Frank Gonzales, Orange. PLACENTIA: 62 houses, \$1.8 million. Builder: Four Season Homes, Costa Mesa. Plans: Frank Gonzales, Orange. RIVER-SIDE: Apartment, \$2.3 million. Sponsor: Riverside First Baptist Home Inc., c/o Flewelling & Moody, Los Angeles; Subdivision, \$1 million, Builder: Gunther & Shirley, Sherman Oaks. SAN CARLOS: Houses, \$2 million. Builder: Lake Terrace Homes, West Los ANGELES: Condominums and subterranean garage, \$10 million. Sponsor: Aluminum Company of America, Los Angeles. Plans: Charles Luckman Assoc., Los Angeles.

GEORGIA—ATLANTA: Apartments, swimming pools & golf course, \$26 million. Sponsor: Cousins Properties and Fidelity Mutual Life Insurance. Plans: Cooper Salzman & Carry; Apartments, \$2 million. Sponsor: Curtis Young, College Park. Plans: Phillip Windsor; Apartments, \$2.1 million. Sponsor: East Valley. Plans: Ted Levy. GAINSVILLE: Apartments, \$1.6 million. Sponsor: Tom Northcutt, Atlanta. Plans: Ted Levy, Atlanta. GARDEN CITY: Housing subdivision, \$672,000. Sponsor: Paloma Inc., Savannah. Plans: Vernon Nowell, Savannah. HAPEVILLE: Apartments, \$4.5 million. Sponsor: International Off Park Corp. Plans: Donald B. Schwenn, Phoenix, Ariz. MARIETTA: Apartment, \$3.6 milion. Sponsor: Dowling Realty, Atlanta; Apartments, \$2 million. Sponsor: Paul E. Thomas; Apartments, \$1 million. Sponsor: E. L. Mullinax.

ILLINOIS—ARLINGTON HEIGHTS: 42 houses, \$1.6 million. Builder: J. G. Thomas, Skokie. Plans: Jerrold L. Brim, Chicago. BELVEDERE: Apartments & swimming pool, \$1.5 million. Sponsor: Ladd Enterprises. CHAMPAIGN: Apartments, \$3 million. Sponsor: Campus Development Corp. CHICAGO: Apartments, \$2 million. Sponsor: c/o Chester A. Stark, architect, Glenview. HECKER: Apartment & shopping center, \$2 million. Sponsor: Hecker & Crossroads Market Corp. Plans: Frank E. Bauers, St. Louis, Mo. PARK RIDGE: Apartments, \$6.7 million. Sponsor: Bristol Court. Plans: Sellergren Inc. ROCKFORD: 100 houses, church, recreational area, parking lot and new road, \$1.3 million. Sponsor: John Knox Assn. and Dr. James B. Adamson, pastor, First Presbyterian Church. Plans: C. Edward Ware, VILLA PARK: 60 houses, \$1.5 million. Builder: Giase & Fillipine, Elmwood Park, Plans: Ray Basso & Assoc., Chicago.

INDIANA—CROWN POINT: Apartments, \$2 million. Sponsor: c/o David Katz, Gary. DUNLAP: Apartments, \$1 million. Sponsor: Dean Baker, Elkhart. Plans: Wiley & Miller, Elkhart. Forr WAYNE: Apartment, \$750,000. Sponsor: Brentwood Apartment Corp. Plans: Vance Rammel. FRANKLIN: Townhouse apartments & shopping center, \$1 million. Sponsor; Fred Frisch, Indianapolis. Plans: David Hill, Seymour. GREEN- CASTLE: Dormitory, \$1.2 million. Sponsor: De Pauw University Board of Trustees. Plans: Holabird & Root, Chicago. HAMMOND: Apartment, \$680,000. Sponsor: Donald Gardner. Plans: Livingston & Assoc., Aurora. INDIANAPOLIS: Apartment, \$2 million. Sponsor: C.W.D. Development, c/o Superior Roofing & Siding; Apartment, \$1.5 million. Sponsor: Klingbeil Haddox & Company, Columbus, Ohio, Plans: T. Ballard Kirk & Assoc., Columbus, Ohio; Townhouses & row houses, \$4.3 million. Sponsor: Castleton Realty; Apartment, commons house & swimming pool, \$3 million. Sponsor: Willowbrook Development. Plans: Architects Coordinate. JEFFERsonVILLE: Apartments, \$1 million. Sponsor: Opportunity Housing, c/o Kemp & Sons, Plans: Donlon, Lofgren & Assoc., Mishawaka.

NEW JERSEY—ALLAMUCHY: 68 houses, \$1.7 million. Builder: Dominic Stamata, Parsippany. ATLANTIC CITY: Middle-income apartment complex, \$2 million. Sponsor: Levco Corp. BERK-ELEY: Garden apartments, \$800,000. Sponsor: William Kress, Nutley. CAMDEN: Apartments, \$3.5 million. Sponsor: Stocktin Station Inc., Plans: P. K. Spohn, Philadelphia, Pa. EGG HAR-BOR: 250 houses, \$3.7 million. Builder: c/o Robert J. D'alonzo, architect, Havertown. MILLBURN: Garden apartments, \$1 million. Sponsor: Vincent Paragano & Son, Short Hills. Plans: James Acrea, Berkeley Heights. MORRISTOWN: Apartment, \$1 million. Sponsor: Monaramus, Field & Development, South Amboy. Plans: Frederick Fischer, South Amboy. WALL: Garden Apartment, \$1 million. Sponsor: Hiddenacres Inc., c/o Frederick N. Fischer, architect, South Amboy. WALLINGTON: Garden apartments & swimming pool, \$6 million. Sponsor: James Nuckel Construction, Little Ferry. Plans: Gerber & Pancani, Newark.

NEW YORK—ALBANY: Apartments, \$7 million. Sponsor: Executive Gardens, c/o Peter S. Myers Assoc., Orange, Conn. BLOOMIN ROVE: Garden apartments, \$1 million. Sponsor: Jerry Kriesberg, Monroe. BUFFALO: Dormitory & dining hall, \$2.1 million. Sponsor: Canisius College. Plans: Leroy Welch. CHAPPAQUA: 70 houses, \$2.4 million. Builder: Elcon Assoc., Great Neck. CLAY: Apartments, \$2 million. Sponsor: Nor-Star. Plans: Greene & Heinrich, Cleveland, Ohio. GLEN COVE: 40 houses, \$1.5 million. Builder: Markwell Construction, Bellmore. Plans: Joseph Zito Jr.; Apartments, \$1.5 million. Sponsor: George Berkman & Herbert Arnold, Glen Head. Plans: Max Simon, New York City. HOLBROOK: 107 houses, \$1.8 million. Builder: Monique Levit, Central Islip, LAGRANGEVILLE: Garden apartments, \$1.5 million. Sponsor: Dee Jay Builders, c/o Miguel France, Poughkeepsie. LIDO BEACH: 114 houses, \$2.2 million. Builder: Robert Feldman, Laurelton. NANUET: Garden apartments & sewage treatment plant, \$1 million. Sponsor: Kenneth Torsoe, Monsey. Plans: Frank A. Sabatini, Ramsey, N.J. NEW ROCHELLE: Garden apartments, \$700,000. Sponsor: Pelhamdale #2. Plans: Lee Perry. New YORK: Staff apartments, \$2 million. Sponsor: Roosevelt Hospital. Plans: Frederick Frost Jr. OCEANSTDE: Condominium apartments, \$700,000. Sponsor: Katz Bros., Hewlett. Plans: Alvin Cassens Jr., Valley Stream. PORT JEFFERSON: 50 houses, \$1 million. Builder: Elwood Estates, South Farmingdale. VISTA: Townhouses, \$5 million. Sponsor; Vista Development, Glenbrook, Conn. Plans: Joseph Osher & James Mitchell Assoc., Stamford, Conn. WEST BRIGHTON: Townhouses, \$2.5 million. Sponsor: John Matucci, Rochester, Plans: Morrison & Morrison, Rochester.

NORTH CAROLINA—ASHEVILLE: Apartments, \$1 million. Sponsor: J. E. & E. N. Hooper, Plans: Anthony Musolino, Washington, D.C. CHAR-LOTTE: 550 houses, \$11 million. Builder: Ervin Construction; Apartment complex, \$1.2 million. Sponsor: Nor West Builders, c/o Jack O. Byoyte; Apartment project, \$4 million. Sponsor: Ervin Construction. Plans: Ferebee-Walters & Assoc.; Low-rent housing development, \$1 million, Builder: c/o 1218 Beatties Ford Rd. Plans: W.



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BUSINESS

starts on p. 35

Edward Jenkins, Greensboro. DURHAM: Dormitory, \$1.7 million. Sponsor: Duke University. Plans: Holloway-Reeves, Raleigh. FAYETTEVILLE: 100 houses, \$3 million. Builder: Heritage Homes; Garden apartments, \$500,000. Sponsor: Champion Developers, Jacksonville, Fla. Plans: Leslie Ellias, Jacksonville, Fla. GASTONIA: Apartments, swimming pool & tennis courts, \$1 million. Sponsor: S.C. Downey Construction. VALLEY COT-TAGE: Garden apartments, \$1.6 million. Sponsor: 'Edward & Samuel Shechter, Spring Valley. Plans: Marvin Flam, Pearl River, N.Y. WAX-HAW: 40 houses, air strip & golf course, \$6 million. Builder: James Nisbeth, c/o Victo Civkin, Fairfield, Conn. WILMINGTON: Apartment complex, 3 million. Sponsor: S & C Construction, Virginia Beach, Va.; Apartment complex, \$1.8 million. Sponsor: Berlin Miles Inc., Norfolk, Va. Plans: Evan McCorkle, Virginia Beach, Fla.

OHIO—CINCINNATI: 27 houses, \$800,000. Builder: Princeton Investment. COLUMBUS: Houses, apartments, and shopping center, \$1 million. Sponsor: c/o Joseph E. and Laural E. Stephenson. Plans: Holroyd & Meyers. DAYTON: Apartment, \$500,000. Sponsor: Charles Francis Jr. DEFIANCE: Apartments, stores, and 92 houses, \$3 million. Sponsor: Ken Ray Inc., Toledo. MENTOR-ON-THE-LAKE: 61 houses, \$950,000. Builder: Simmons Construction. MIDDLEBURGH: Apartments, \$1.5 million. Sponsor: Lanco Development, Cleveland. Plans: Keeva Kekst, Cleveland. MINERAL RIDGE: Apartment complex, \$1 million. Sponsor: C/o architect, J.E. Holland. NORTH OLMSTED: Apartments and townhouses, \$2.2 million. Sponsor: David Margolius, Shaker Heights, and Harvey Zeman, University Heights. Plans: Andonian & Ruzsa, Brecksville. SoloN: 23 houses, \$575,000. Builder: Cannon West, Shaker Heights. STRONGVILLE: Apartments, \$1 million. Cleveland. Plans: Anderson & Dracon, Parma. WILLOUGHBY: Apartments, \$1 million. Sponsor: J & E Builders, University Heights. Plans: Ross, Yamane & Asoc., Maple Heights: plans: Ross, Yamane & Asoc., Maple Heights: Plans: Ross, C/o architect, Arnold A. Peterson, Cleveland.

PENNSYLVANIA—ALLENTOWN: Apartments, \$1 million. Sponsor: Twin Fountain Terrace, c/o Martin M. Laibow, Cornerville Heights. DELA-WARE COUNTY: Apartment, \$2 million. Sponsor: Leiti & Bird. Plans: Jack Swerman, Chester. EFFORT: 400 houses, \$5.2 million. Builder: Fred Frankel & Assoc. PHLADELPHIA: Apartment, \$2 million. Sponsor: Norman Gelsman, Wyncote. Plans: S. Sherwin Rochlis; Apartment, \$1 million. Sponsor: Sander Field. Plans: Jack Levin. PITTSBURGH: Apartment, \$1 million. Sponsor: c/o architect, William Stoops, M R No. 10, Box 43, Apollo; Married students housing at University of Pittsburgh, \$1.7 million. Sponsor: General State Authority, Harrisburg. Plans: Kuhn Newcomer & Valentour, Mount Lebanon. RD-LEY PARK: Apartments & stores, \$2 million. Sponsor: c/o architect, Raymond Di Paola, Media. SWARTHMORE: Dormitories, \$1 million. Sponsor: Swarthmore College. Plans: Vincent Kling. YARDLEY: Apartments: \$1 million. Sponsor:

TENNESSEE — CHATTANOOGA: Garden apartment, \$800,000. Sponsor: c/o architect, Donald E. Stoll, Nashville; Apartment, \$1.5 million. Sponsor: Chattanooga Junior Chamber of Commerce. CollEGEDALE: Residence hall, \$1 million. Sponsor: Southern Missionary College. Plans: Bianculli Tyler. KNOXVILE: Apartment, \$4 million. Sponsor: John Fiser, Box 21. Plans: Lindsay & Maples. MEMPHIS: Apartment complex, \$2.8 million. Sponsor: Stanley Okeon Falls Bldg.; Apartment buildings, utility building & swimming pool, \$850,000. Sponsor: Smith & Turley. Plans: Greif & Lawrence; 100 houses, \$1.2 million. Builder: Wallace E. Johnson. Plans: Ost, Folis, Wagner. NASHVILLE: Apartment, commercial & office building, swimming pool, \$1.7 million. Sponsor: Greenhill Towers. Plans: Ed Johnson & Assoc.; Garden apartments, \$1 million. Sponsor: Cheek & Jones.

Leaders start on p. 42



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Photos: Leland Y. Lee



In front



In the rear . . .

And inside . . .

This bestseller owes much of its success to artful stage management



With 53 sales in four months, the split level shown here is the most popular of five models offered by La Paz Homes at Mission Viejo, a California new town.

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A long front terrace, plus planting beds and potted plants, ties the house to its gently sloping site and enhances its curb appeal. For extra greenery, a lawn was planted where there would normally be a paved driveway.

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NEW JERSEY



A boxy, plain two-story house becomes the neighborhood showcase (at right) with the help of Andersen Casements and Gliding Windows. Remodeler: Norm Woodley. Owner: John Smith, Lake Minnetonka, Minnesota.

It's no secret how remodeler Norm Woodley saves money with Andersen Windows



Just ask him!

Over the past 20 years, Norm Woodley has built a solid reputation as a superb remodeler and as a man who readily speaks his mind:

"I figure a man gets what he pays for. A cheap price buys a pile of junk. It buys trouble. Pay a little more for Andersen quality and you make money on the deal.

"There's no fiddling around with Andersen Windows. They're easy to set. You just put 'em up and nail 'em in. They come off the truck square and true. Ready to go. I save time. Lots of it.

"Another thing. I can get the size and type I need. Never have to make do with a window that's awkward or doesn't fit the job.

"Then there's those darn callbacks. I've had my share of them with cheap windows. And they can cost a man plenty. But on my Andersen Windows, I remember only two complaints in 20 years. Both minor condensation problems that were easy to iron out.

"Price? Like I said, you get what you pay for. Besides, my customers know Andersen Windows. They recognize them as quality, and they're happy to pay the little extra that Andersen's might cost.

"And let's face it. They help me leave a nice looking job behind . . . doggone important if you're going to make money in this business.

"They're easy to operate. They're weathertight. What more can you say?"

Very little, Norm. Except to remind you that there are **6 beautiful types** to choose from (hundreds of sizes).

And now there's a **completely new** Andersen Perma-Shield[™] line of windows and gliding doors. They combine the insulating value of wood and the lifetime maintenance savings of a rigid vinyl shield.

They don't need painting. Nor scraping. Nor rubbing down. And their armor-like finish won't pit nor corrode.

You can see them all at your Andersen dealer or distributor. Let him show you all the reasons why Andersen Windows can help you make more money in remodeling. *Andersen Corporation*, *Bayport*, *Minnesota 55003*.

*In Canada: Perma-Sheath™







Upper left. Wall of Andersen Gliders helps make porch a year-round, lake-view room.

Upper right. Divided light Andersen Casements complement a traditionally styled living room.

Left. Elegant half bath is enhanced by small Casement unit.

Right. Doesn't this Casement bay-window combination brighten a cheery dinette?

Below left. Casements flank picture window in this dramatic treatment.

Below right. Window seat makes a perfect spot for a young girl to dream her dreams.









Are new towns just oversized subdivisions with oversized problems?

H&H: May I congratulate you on your brilliant study of new towns [June], a typically timely and thoughtful article. May I, at the same time, offer a strong dissent to the conclusions you reached.

You have taken seven basic problems which you find new towns have in common and illustrated them with data from various new-town projects. But not all new towns have had the same experience, and if Reston, Va., is run through the gamut of the hypothetical seven—which for reasons of space was obviously not possible in the article the picture appears somewhat brighter than you painted it. Let me briefly illustrate, using the seven categories used in the article:

1. Location. Reston is located precisely where a new town (satellite city) is supposed to be on the Year 2,000 Plan for the Metropolitan Area of Washington approved by the National Capital Planning Commission.

2. *Financing*. While it is true that money was hard to come by in the early days of new towns—as with so many new ideas—those days are over.

3. Sales. Our pilot-project phase was planned to probe the market for us and has served its purpose well. We know we can sell townhouses, rent apartments and commercial facilities, develop lot sales and industrial properties—and are working successfully in all those categories.

4. Industry. "It's needed most in the early stages, and that's when it's toughest to get," you write. Perhaps. Yet we had industry before we had houses built, and today we have four industries in operation, three more ready to build on land they purchased, and many more in various stages of negotiation.

5. Government. Can a developer ask more of a government body than to create an entirely new zoning ordinance category so that he can produce a master plan for an entire community based on completely new concepts? I think not, and that's what the Fairfax County Board of Supervisors did for us.

6. Who builds? We made some mistakes, to be sure, but our construction division is now first-rate. Private builders are competing with us on land we sold them—which is good for them, good for us, and good for Reston.

7. Residents. An independent survey by Carl Norcross, published in the Urban Land Institute's News and Trends in City Development, said, "The replies are probably the strongest testimonial for planned, open-space communities that can be found anywhere. Reston buyers are exuberantly enthusiastic." By your scorecard, then, we have had

seven hits, some runs, and a couple of errors.

A more meaningful standard for judging new towns is to ask how far they have come in the timetables they have set themselves or had set for them. Reston was conceived as a 20-year plus project, and the first years are obviously the most difficult. How are we doing after five years with over fifteen to go? The answer: We are doing very well indeed—even surprisingly well. Analogizing a new town to a subdivision is like analogizing space flight to the airplane—they just ain't the same thing at all. Reston is not an oversized subdivision, and it makes a great deal of economic sense.

> Robert E. SIMON Jr., president Reston Reston, Va.

H&H: You laid the issues squarely on the line and raised the right questions in the right places. You also touched on a basic point—namely, just what is a new town?

If the term is to have any significance (beyond simply being a promotional gimmick), I think that the sooner it is given a definitive meaning, the better. An oversimplified definition might be: "an identifiable and more or less organized congregation of homes and people with appropriate community facilities and services and *de*veloped around or based upon an economic activity."

The key here is *economic activity*, which should be the town's reason for being. In this respect, we tend to forget that the new town in America is really not new. One of the best new towns of the 20th century is Kingsport, Tenn.; another is Longview, Wash. Although frowned on today as paternalism, a number of the well-conceived and wellexecuted company towns of the late 19th and early 20th centuries have much more to offer than the contemporary new towns. A case in point is Chicopee, Ga., which in every respect would qualify under the above definition.

I suspect that much of our problem with current new towns is the lack of this essential ingredient of economic activity.

MAX S. WEHRLY, executive director Urban Land Institute Washington



H&H: You have done a fine job of assembling a great amount of information and have made some points that will be helpful to people throughout the industry.

Just to set the record straight, I would like to point out that financing for the land acquisition of Columbia was arranged entirely with Connecticut General. The total financing of \$50 million, which brought the Chase Manhattan Bank and Teachers Insurance & Annuity Assn. into the picture, was not arranged until December 1965. In other words, the \$50 million and the three lenders were not involved from the beginning.

W. SCOTT DITCH, director of information

Community Research and Development Inc. Baltimore

H&H: You are to be commended on your concise and comprehensive review of new towns and their growth pains. Those intending to venture into this phase of land development should learn valuable lessons from your article.

Although you indicate that the problems of financing and sales apply particularly to projects of more than 6,000 acres, these problems can equally hinder projects of half this size. Our recent involvement in several projects in the 2,000-to-3,500-acre range leads us to conclude that far more attention must be directed toward feasibility studies, primarily to determine initial construction costs and realistic initial income.

Possible locations for such projects may well exist in complexes of several mediumsized communities, which would provide land at reasonable cost and existing stable employment, yet require new development stimuli.

RICHARD S. BEEBE, director of planning H. W. Lochner Inc., engineers Chicago

Heating-fuel costs

H&H: Your June article "The War of the Heating Systems," criticizes electrical rate discounting. You will find, upon closer examination, that the electric-heat user pays as much for electrical lighting and appliance energy as the non-electric-heat user, because the starting blocks in both step-rate systems are about the same. What is even more to the point is that this is also true for most gas rates!

Regarding subsidies by electric utilities, in all fairness it should be stated that they are also offered by some gas utilities. Also, free fuel-storage facilities and quantity discounts are not unknown in the oil business.

On page 106, in the cost comparison table, is a reference to 80% efficiency for oil and gas systems. The accepted values for this are 75% for gas and 70% for oil. In the degreeday formula for calculating fuel consumption, a constant of 24 is used. The electric utilities use a constant of 17. This obscure detail is the same as reducing the efficiency to a more realistic $17/24 \times 70\% = 50\%$ for oil! Thus the equivalent cost of gas and oil in this table should be changed considerably. Another criticism of this table is the di-

rect fuel comparisons. Electric heat is a dif-

Shouldn't you include better heating in your options to today's buyers? A hydronic system can swing the sale!

More and more builders are "sweetening" their sales appeal with buyer options. Why not offer one that really appeals to comfort-conscious buyers—a quality hydronic heating system? This modern version of hot water heating puts a clean, even wall of warmth around the home. There are no drafts, hot spots or noises. No decorating problems. All these points make mighty fine listening to the smart second- and third-home buyers you deal with in today's market. They'll certainly be impressed if they have ever lived with a poor heating system. And here's the best news: *Hydronic heating can be competitive with warm air*. Two men can usually install it, complete, in a single

day. The new boilers, of sturdy cast iron, go almost anywhere. They take only 2 by 3 feet of space and are available for gas or oil. The trim, wall-hugging Heatrim* baseboard panels for circulating hot water take no room space at all. The lady can hang floor-toceiling draperies and place her furniture as she pleases. Before you make another start, see your American-Standard contractor for the facts about the new equipment and installation techniques that make American-Standard hydronic heat competitive with warm air. Or write American-Standard, Plumbing and Heating Division, 40 West 40th Street, New York, N.Y. 10018.

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111 W. Washington St., Chicago, III. 60602 Circle 60 on Reader Service Card ferent fuel, a different system, requiring a different environment, thus not subject to this type of comparison. This is a favorite trick of the anti-electric-heat people. Electric utilities do not claim lower costs. When applied properly, electric heat is a quality system, and it is fairly competitive.

In spite of the apparent bias in your article regarding costs, subsidies, and promotional practices, you do convey the thought, whether intentional or not, that electric heat, total comfort with warm air, and the heat pump all rate high technically.

F. T. RITTER, director of technical services Metropolitan Edison Co. Reading, Pa.

H&H did not criticize rate discounting by electric utilities. We described it as an effective inducement for winning over homebuvers to a particular fuel or heating system. Our report does not pass judgment-either implied or stated—on any kind of heating subsidy or any other sales or promotion practice in the heating industry. The fuel-cost comparison table, as the article points out, is reproduced from a card published by the Better Heating-Cooling Council. It is presented as a current example of heating-fuel sales promotion by the hydronics spokesman-not as a guideline. Mr. Ritter's statement that "electric utilities do not claim lower costs" is somewhat at variance with much of the electrical industry's promotion literature.-ED.

Alternatives to realty taxes?

H&H: Allow me to make a few comments on the property-tax "muddle" [NEWS, June].

Most students of property taxation agree that real estate taxes should be greatly reduced because they discourage residential construction, increase the cost of home ownership, and impair the quality of our housing. But how can cities and counties bring in the greatly increased revenue needed to discharge their responsibilities?

Many tax experts advocate broadening the tax base but don't tell us what taxes should be used. City income taxes, if permissible, will drive residents out of the city. Payroll taxes are inequitable because they impose a burden on earned income without taxing unearned income. Business taxes will drive business out of the city. Gasoline taxes are often preempted by the states and used for highway construction. There remains only the sales tax as a major source of revenue. Yet sales taxes are in many instances used by the states. Moreover, there is a definite limit to the revenues that these taxes can produce because the rates cannot be increased ad infinitum.

So it seems to me that no tax expert has yet come up with the proper answer to the impasse.

HERBERT BAB, economic adviser Statewide Homeowners Assn. Los Angeles

FHA market study

H&H: The voice of local criticism has been raised in protest against FHA's market analysis of the Cincinnati area [NEWS, May]. Our reports on the vacancy situation have been submitted to FHA with requests for a new study to reflect the true picture and help avoid a HOUSE & HOME'S 1965 editorial index, an eight-page reference guide, is now available. If you'd like a copy (there's no charge), write to: Reader Service, HOUSE & HOME, 330 West 42 Street, New York, N.Y. 10036.

housing shortage in some market segments.

Vacancies here are at their lowest rate in five years, and the favorable trend has accelerated during the past year. During the same year the area's nonagricultural employment has increased by 17,300 jobs. Despite an FHA forecast of decline, construction of new rental units in Hamilton County for 1965 was 16% above the average of the last five years. FHA had suggested no new rentals would be required for three years.

RICHARD G. COLEMAN, director The Better Housing League Cincinnati

FHA foreclosures

Builder Robert Seabury suggested (LETTERS, July) revisions to FHA'S methods of selling foreclosed houses, including pricing resales above the level of existing mortgages in the area and obtaining deficiency judgments against walkaway homeowners. FHA Commissioner Philip Brownstein comments:

H&H: In a free market, supply-demand relationships establish the price at which houses will sell. Unfortunately, it sometimes happens that property values in a given area may dip slightly below some outstanding mortgage balances. Conventional and FHAowned home sales will then take place at that market level.

Arbitrarily pricing FHA-owned homes at a level above existing mortgage balances would be artificial and would presumably reflect the last sale rather than the market and comparable conventional sales. On the other hand, market-level sales should work to bring stability and to restore the market.

As to what happens to the family after foreclosure, mortgage companies may report to credit bureaus the names of borrowers whose homes are foreclosed and also may seek deficiency judgments against such borrowers. FHA does not require this, however. Lenders are direct participants in the mortgage transaction and in foreclosure procedures; FHA is not. Foreclosure action is a matter of public record. If a person who has permitted his home to go to foreclosure again applies for a mortgage, the foreclosure history should be found by a routine credit check.

Laws governing deficiency judgments vary from state to state. For FHA to seek such judgments would give unequal treatment by the government to borrowers. Experience indicates that the threat of lawsuit would have little effect on preventing foreclosures. Loss of income, death, ill health, and divorce are major causes of foreclosure which would be unaffected by the threat of suit.

FHA is very much concerned about the



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Circle 62 on Reader Service Card

LETTERS start on p. 52

foreclosure problem and the personal difficulty it causes families. The agency has forbearance provisions which encourage mortgage lenders to work out arrangements with borrowers in financial difficulty so as to avoid foreclosures. The system has helped many families to retain their homes.

PHILIP N. BROWNSTEIN, assistant secretarycommissioner Federal Housing Administration

Washington

Open-occupancy

H&H: I think your July editorial represents public service of the very highest order. HOUSE & HOME, more than any other publication in the nation, speaks to the leadership in the nation's homebuilding industry—the very industry which, with its colleagues in real estate brokerage and mortgage financing has failed thus far to recognize the imperative of full equality of opportunity in housing based on law. The July editorial, therefore, reafirms both H&H's integrity and its determination to serve the large public interest.

There will, of course, be cries of outrage and criticism from those of limited views and selfish motivation. But this is the measure of leadership, and we here at NCDH commend you for it.

JACK E. WOOD, JR., assoc. executive director National Committee Against Discrimination in Housing New York City

Housing in the Great Society

H&H: Your editorial on the Great Society and its attitude toward housing [June] deserves reprinting and submission to all members of Congress and all offices of the Housing & Urban Development Dept.

SIDNEY B. POSIN, vice president Arbor Homes Waterbury, Conn.

Renewal in Tucson

H&H: Your report of the appointment of Don Hummel (former mayor of Tucson, Ariz.) as assistant secretary of HUD [NEWS, June] notes parenthetically that Tucson's first urban renewal project was dropped by the city. To present the full story, the parentheses should be expanded to add that early this year Tucson's electorate, in a bipartisan effort, resoundingly adopted an 80-acre urban renewal project which will entail an approximate \$8-million federal grant. This project is a substantial part of the initial program, to which you refer, that was dropped in 1962 by Hummel's successor administration without a public vote.

The fact that Tucson is the only Arizona city that has embarked upon urban renewal after several abortive attempts in Phoenix and elsewhere is a belated tribute to the efforts of Don Hummel—and evidence that Tucson has overcome the anti-federal government philosophy which had deprived Arizona cities of valuable federal assistance for too many years.

S. LENWOOD SCHORR Schorr & Karp, attorneys Tucson Ariz.

Writer Schorr, Tucson's special counsel for urban renewal, was previously assistant city manager and urban renewal director.—ED.

MR. BUILDER... HERE'S THE INSIDE STORY

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 - House & Garden Decorating Guide
- Better Homes & Gardens Home Improvements
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These successful builders won't tell you all their secrets.



"Tappan has more to offer," says Irving Stitch, who shopped the market to find the best buy for his Capewell Towers high rise in Hartford, Connecticut. Each of the 200 units he built last year includes a Tappan range and hood. And they rent fast at \$127 to \$197 monthly. "Finest equipment on the market," says Mike and Travis Henderson, builders of Henderson Hills in Oklahoma City. They produce volume sales (300 units last year) by offering top value. Standard equipment in a Henderson kitchen: Tappan range, hood and disposer.



"Tappan quality lends itself remarkably well to the decor of our homes," says Robert Carlson, custom home builder and developer of Royal Oaks in Wood Dale, Illinois. His magnificant homes, priced from \$45,000 to \$125,000, feature a complete kitchen of Tappan Time Machines.

"Our customers trust Tappan," says Manny Barenholtz, developer of Four Seasons in Aurora, Ohio. He has created an outstanding community by combining good taste with a flair for promotion. And by offering such exciting features as the incredible new Tappan Electronic Cooking Center.



They feature Tappan Time Machines.

Tappan Twin-Temp Combo: The refrigerator-freezer that's practically a supermarket in the kitchen. Over 20 cu. ft. of storage in only 36" of space. No defrosting ever. Classic built-in look, but a snap to install. Match cabinets with door inserts. Also in white, coppertone or Lusterloy.

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wood or choose Lusterloy, coppertone,

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rors; luminous ceilings with a choice of colored bath fixtures.

Big features like Kingsberry's handsome, paneled dens; small features like Kingsberry's new cultured marble sills for aluminum windows; bright features like a choice of luxurious lighting packages.

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House & Home

August 1966

EDITORIAL

On being an expert

'Twas brillig, and the slithy toves did gyre and gimble in the wabe: All mimsy were the borogoves, and the mome raths outgrabe

-Lewis Carroll

Jabberwocky? You bet. And it's the kind of stuff you hear from the so-called experts who blame the high cost of housing on the industry's supposedly old-fashioned technology.

There's no question about the real concern of many people over the inability to house low-income families adequately. But the problems are not technical. And when next the inevitable argument about housing's high prices comes up, we in the industry can help clear the air by giving the experts some facts to chew on.

The first facts these experts should know (but apparently don't) are the costs involved in the price of a house. In 1966 the average single-family, merchant-built house will be priced at about \$22,000. The price breaks down about like this: improved lot, \$6,000; materials and products, \$8,000; on-site labor, \$4,000; financing, overhead, sales costs, and profit, \$1,000 each (total, \$4,000).

The direct cost of this \$22,000 house (without lot) is only \$12,000, and it offers about 1,600 sq. ft. of livable floor area, three bedrooms, two baths, and full air conditioning. The unit cost is only \$7.50 per sq. ft.; there is no other system of building known that will come anywhere near that figure and still provide such comfort and luxury.

To go further, the mechanical elements in the house total \$4,000 and break down like this: electricity, \$400; plumbing, \$1,000; appliances, \$8,000; and heating and air conditioning, \$1,800. If you exclude these from our structure its cost is only \$8,000, or \$5.00 per sq. ft. That's a very low figure for a finished, permanent structure.

The next facts our experts should know are the reasons we build as we do. We are the only industry that, in effect, builds a factory to make a product and, when the product is finished, tears down the factory. That sounds like a terrible waste of money, but it really is a rather efficient system. Our "factory" is an assemblage of men and materials at the site, not a huge building with a big capital investment in equipment. It makes sense because what we build is fixed in place—tied by its foundation to the ground. (And it is built to last much longer than any other consumer product.) So instead of moving our product along an assembly line, we keep it stationary and move the men and materials.

Although modern industrialization may not be too apparent

to the casual observer of this process, it is, nevertheless, there. Highly mechanized earthmoving and materials-handling equipment, portable and fixed power tools, prehung doors and prefabricated windows, plywood, drywall, trusses, prefinished interior and exterior surfaces, and hundreds of other products of modern industrialization all make up the fabric of housing's own industrialization.

Should the experts belittle this explanation, consider the example of the automobile, which has to be marked up some 60% to pay for the overhead imposed by its factory and producer. Or consider mechanized house prefabrication plants: the prefabber must put less than a 40% total markup on his house package to compete with the conventional on-site subdivision builder. And since the prefabber's plant overhead alone requires at least a 35% markup, the big subdivider's on-site factory is usually a cheaper proposition than any other modern building method. And it certainly makes houses look like better buys than automobiles.

Finally, we should unburden our experts of all the fond illusions they carry around about the brave new world of space technology and esoteric chemistry. There are experts who will tell you that housing could be built for half the present price if we used entirely new materials and construction techniques. There are even some who will tell you that they know what these new materials are.

Well, these new materials have got to be cheaper than air, because if we were to omit completely the exterior walls of a single family dwelling, we could only save 5%. In other words, if modern technology could come up with something that would give us exterior walls for nothing, it would make little difference in the final price.

The truth of the matter is that the housing industry continues to cut every possible nickel from the cost of its product. For instance, the roof truss system in the latest NAHB Research House reduces the number of trusses by more than half and uses the same size members. Yet the net result is a saving of only a few cents per sq. ft. for the entire roof.

Let's let the experts know these things and maybe we can make some progress in cutting the real high cost items in housing: land, money, and politics.



On the following 16 pages you will see ...

13 award-winning apartments and townhouses*

And it's no coincidence that they've all been highly successful in the marketplace—often in areas where other multi-family housing, offered at lower rents or prices, has gone begging.

The moral: Imaginative exciting design is a highly marketable and often indispensable—commodity in today's apartments and townhouses.

To see how the award-winning architects created this commodity, turn the page.

*From the 1966 Homes for Better Living competition sponsored by the American Institute of Architects in cooperation with HOUSE & HOME and American Home. (For details, see p. 81)

UPPER-LEVEL WALKWAY is a feature of Honor-Award project. More photos are shown on p. 66,



1. STONE WALLS and shingled mansard roofs maintain house-size scale in this large project.



2. RAILED OVERPASSES cross the inner courtyards, lead to upper-level units.



Rambling clusters give this project the appeal of small neighborhoods

And since each of the ten clusters contains ten or eleven units of differing sizes and types, the resultant variety of families makes it in fact a real neighborhood. Most tenants are professional people, but their professions range from engineering and sales through teaching, medicine, government and architecture, to artists, writers, airline pilots, and secretaries. Approximately 90% of the 107 units have been rented since their completion in December, and the developer (who has projects in 13 other states based on the same broad market appeal) now has another larger group of similar clusters under construction in another part of the 24-acre project. Rentals range from \$140 for a one-bedroom unit to \$230 for a two-bedroom 'penthouse' unit at the top of the hill.

Honor Award. Architect: Ireland & Assocs. Developer: Multicon. Location: Towson, Md.

continued



3. STEPPED-UP BUILDINGS ascend the sloping site, have on-grade units at each level.



4. CARPORTS off inner courtyards have roof decks separated by extensions of carport dividers.



TYPICAL CLUSTER (see site plan, opposite) contains one-, two-, and three-bedroom units.

Shaded sections refer to lower levels (see section, below), unshaded sections to upper units.



VACATION TOWNHOUSES, built of rugged materials to withstand weather, are clustered together along a strip of California coastline.

Seaside condominiums make the most of a narrow strip of oceanfront

The ten-unit cluster plan could ultimately allow the developer to put 137 vacation units on the 35-acre site. Each unit has been given a view of the ocean without sacrificing privacy, and each unit is a 24' cube with as few openings as possible except for sky-lights, bays, or glass-enclosed decks. Result: both privacy and protection from the almost perpetual winds off the ocean. There are also private walled gardens, greenhouses, decks, and terraces, most of them enclosed against the wind. Interiors are natural wood, and the redwood exteriors are left to weather. All of the first ten units, priced from \$25,000 to \$32,000, have been sold, and the next cluster is under construction.

Award of Merit. Architects: Moore, Lyndon, Turnbull, Whitaker. Developer: Oceanic Properties Inc. Location: Sea Ranch, Calif.





SECOND LEVEL





NARROW BRIDGE leads from upperlevel bedroom to bathroom and storage.



OPEN BEDROOM can be enclosed for privacy by lowering sailcloth suspended from skylight.



GLASSED-IN DECK (view D in plan), provides sunlight, view of ocean, and wind protection.





KITCHEN BLOCK open toward dining area, supports bathroom, balcony, storage area above.



COMMUNITY DECK, sheltered by surrounding townhouses (view A), provides wind protection.



OCEANFRONT ENTRANCE (view B) leads between houses to community courtyard (above).



A

THIRD LEVEL





COMPACT PROJECT includes two joined buildings, each with two two-bearoom units, sheltered parking off the side alley (left), recessed upper deck.

How to put four patio apartments plus parking—on a 50'x100' lot

Moreover, there's nothing cramped about this project. Each of the four two-bedroom units has 840 sq. ft. of living space indoors, a large patio or deck outdoors, and parking space in the centrally located carport on one side of the lower level. And each unit gains excellent privacy from well separated entrances, screened-in patios or decks, and wide overhangs at both levels.

Planned for a middle-income apartment neighborhood, the twin buildings are placed sideways, one behind the other, on the narrow lot to take full advantage both of the site and the existing alley along one side. Rentals are \$175.

Award of Merit. Architect: Sam Kiyotoki. Builder: Jack C. Kunz. Location: Los Angeles, Calif.





Photos: Katsumi Taniguchi



NARROW SIDE of project faces street. Entrances to rear and upper units are at right.



PRIVATE PATIO runs across rear of project with fenced-in service areas at either side.

LOWER LEVEL

UPPER LEVEL



UPPER-LEVEL UNIT has large living room with sliding glass doors to private deck.



LAND SIDE OF PROJECT features sheltered balconies, cut out of the steeply sloping shingled roofs, which provide protection from the wind.

A staggered plan gives these unusual vacation townhouses unusual privacy

Specifically, the setbacks of this seven-unit oceanfront building 1) decrease the areas of common wall, 2) provide private pockets for outdoor living, and 3) give each unit a feeling of separateness. More privacy is gained from the individual carports and entrances to the units. And the side-by-side bedroom balconies in the larger units are separated on both levels by an extension of the party wall and the continuation of the sloping roof line. The condominium units range from a 720-sq.-ft. one-bedroom unit for \$16,500 to a 1,200-sq.-ft., two-bedroom, two-level model for \$25,000. All were sold well before completion.

Award of Merit. Architects: Donald Blair and Saul Zaik. Developer: Salishan Properties, Inc. Location: Gleneden Beach, Ore.





Photos: Edmund Y. Lee



SEAWARD SIDE OF PROJECT shows varying heights of low-pitched roofs, overhangs that shelter glass living-room walls, rugged fences around patios.



BALCONIES ON THE PLAZA, separated by extensions of party walls, overhang the shops below and form a sheltered walk around the J-shaped center.

These townhouses bring single-family living right into the center of town

They form the nucleus of the first village center of Reston, Va., a 7,000-acre new town 17 miles outside of Washington, D. C. One 34-unit section curved around a community plaza (above), has shops on the ground level, two levels of living above. A second section (right) and a similar section across the lagoon (see site plan) contain 41 three- and four-level units. Since their December opening, all but one of the over-the-store units have been rented at rates ranging from \$125 for efficiencies to \$250 for two-bedroom units. More than half of the townhouses have been sold at prices from \$36,000 to \$45,000, depending on size rather than location.

Award of Merit. Architects: Whittlesey & Conklin. Contractor: Eugene Simpson and Brother, Inc. Developer: Reston Virginia, Inc.









VILLAGE CENTER contains 146 living units in a variety of apartments and townhouses.



RENTAL UNITS above shops have private entrance courts at rear near parking area.



Photos: Bill Maris

wATERFRONT TOWNHOUSES have three levels of glass walls, two of balconies, facing lake.



UNIT C

FOUR-LEVEL UNIT has main second-level entrance at left, family entrance at right.





STAGGERED FACADE bends gradually around the curved site, well screened from the street by trees, carports, and entrance-court walls.

These townhouses expand—and upgrade—an existing rental project

When the two-thirds-of-an-acre site was purchased, half of it was already occupied by a pair of six-unit apartment buildings. First, the architect—who was also the new owner—remodeled the existing buildings. Then he designed a staggered plan (*lower right*) to make the most efficient use of the remaining simi-circle of land. The new section includes ten townhouses—one-bedroom units near the ends of the semi-circle and larger two- and three-bedroom, twolevel units in the center. All have individual carports and entrances along the curved street. Rentals range from \$115 to \$275, and the project has been almost fully occupied since its completion in early 1965.

Award of Merit. Architect-Owner: Howard Barnstone. Builder: Metropolitan Builders Co. Location: Houston, Tex.



Photos: Hickey & Robertson

SHADED BEDROOM BALCONIES above carports alternate with wider living-room decks.



UPPER LEVEL





REAR BEDROOM of larger central unit has deck at left, window to inner court, right.



COURTYARD WELL, seen here from living room, lets light into large unit (*shaded in plan, right*).



REGIONAL FLAVOR of San Francisco in 1890s is carried out by shingled facades, tall windows, old-style porch railings, paneled or shingled garage doors.

High-priced condominium townhouses make the most of high-cost land

Six three-story units, each priced at \$98,000, occupy a prime residential site which is only 106' wide and 137' deep (*land plan at right*).

The small site near downtown San Francisco, formerly zoned for three detached-house lots, is now divided into strips of land slightly less than 18' wide. Yet each unit has 2,165 sq. ft. of living space, plus a two-car garage and 350 sq. ft. of unfinished space on the street level. And despite the narrowness of the lots and the proximity of the houses, each house is almost totally private from its neighbors. Individual entrances are not only deeply recessed but also separated by street-level projections which enclose trash closets. On the two upper levels, both front and rear windows have been placed so that no unit looks into another unit or onto another unit's outdoor living area.

Award of Merit. Architect: John Louis Field. Builder: C. M. Peletz Co. Location: San Francisco.





CHEERFUL ALCOVE, at far end of living room, overlooks garden and deck at rear of house.



OLD-FASHIONED DETAILS of interior trim show in paneled kitchen door and frame.



DINING DECK serves both family eating area off kitchen and formal dining room (*below*).



SERIES OF SKYLIGHTS admit daylight to dining room from upper-level light well.



FIRST LEVEL



FAMILY EATING AREA, beyond kitchen, is set in two-windowed bay facing street.



NARROW DOOR opens dining room to dining deck, with blank wall of next unit on one side.

AWARD WINNING APARTMENTS AND TOWNHOUSES continued



HILLTOP PROJECT combines apartments on three levels, left, and two-story townhouses.



LANDSCAPED WALKWAYS divide large inner recreation space into small areas for privacy.

A high-density project surrounds landscaped outdoor living

That is how the architect de-emphasized the project's density—72 units on 1³/₄ acres. He grouped the units in a triangle, placing 47 apartments on one side and 25 two-story townhouses on the other two sides. Inside the triangle he placed a landscaped area of trees and walkways with a swimming pool at the center.

Outside, the project is three stories high plus parking. But inside, from the garden area, the project appears only two stories high. Reason: the project is cut into a hilltop, and the grade slopes down from the rear of the units to the front. Rentals range from \$100 for one-bedroom apartments to \$325 for two penthouses. Townhouses are \$180.

Honorable Mention. Architect: Thomas & Wolverton. Builder: Nitco. Location: Walnut Creek, Calif.







ONE BEDROOM UNIT





TWIN ROOFS on either side of the central court (plan, below) add interest to the exterior and to interiors of the four corner units.



A compact sixplex offers a variety of plans around a center courtyard

The plans were varied by changing the size and shape of living-dining areas, altering the type and placement of built-in storage, and by making a second bedroom convertible to a den. Private entrances from the central court contribute to the feeling of individuality in each unit.

The six units rent from \$140 to \$185, and although these are slightly higher rates than others in the same area, the small project (*cover photo*) has had a waiting list since its completion a year ago. This is the first building in a small $(1\frac{1}{2}-acre)$ project which will eventually contain 18 more units apartments like those shown here and townhouses.

Honorable Mention. Architect: John Anderson. Builders: Wood Construction, Leo Seagrove. Location: Bellevue, Wash.



REAR DECK, shared by two units, is divided and screened for privacy by redwood fencing.



OUTSIDE STAIRWAY from lower-level garage leads to the project's main entrance.



INSIDE STAIRWAY, also from garage, leads directly into inner courtyard.

AWARD WINNING APARTMENTS AND TOWNHOUSES continued

Photos: Richard K. Koch



UNUSUAL DETAILS are sloping, shingled roof caps over cantilevered balconies. Simple parapets match fences below and stairway enclosures.

Striking design draws tenants in an area where vacancies are the rule

This eight-unit project hasn't had a vacancy since it was completed late in 1964. What's more, it has had a constant waiting list even though most neighboring projects with lower rents are partly vacant. Set back from two streets on a wedged-shaped, half-acre corner lot, the project looks like a single building. Actually, it is two identical L-shaped buildings sited so that the insides of the Ls form a central courtyard. Entrances to all units face the courtyard on two levels (as do the kitchen walls, bathrooms and storage). Living areas, faced away from the central court for privacy, have outdoor patios or decks screened from the street by fences or high parapets. Rents range from \$150 to \$185.

Honorable Mention. Architects: Ferry & Henderson. Builder: Duda & Son. Location: Springfield, Ill.





RAISED CEILING follows line of roof cap that canopies balcony off upper living room.



TWO-LEVEL COURTYARD, sheltered by upper walkway on four sides, is open at two corners.





STAGGERED SITING allows more privacy for individual units that step up sloping hill.

Here's faculty housing with three bedrooms renting for only \$110

For that low rate, occupants of this ten-unit project near Kenyon (Ohio) College get many of the amenities of much higher-priced apartments. Items: third floor studies overlooking trees, private backyards with outdoor storage and big closets.

Rents were held down by careful planning, simple design, and the use of low-cost materials like plywood siding and concrete-block walls. The architect, who got the idea for these units from European townhouses shown in HOUSE & HOME (July '61), found the land, arranged the financing, supervised construction, and now manages the project.

Honorable Mention. Architect: Jim Morgan. Builder: R. A. Bergs Inc. Location: Gambier, Ohio.



SLANTED WINDOW WALL in quiet top-level study provides view of trees, shelter from sun.



REAR PATIOS are partly screened from neighbors by projecting walls and storage sheds.

AWARD WINNING APARTMENTS AND TOWNHOUSES continued

Photos: Rene Laursen



CORNER BALCONY of end unit is protected by deep overhang and projecting panel.

A high-density rental project mixes apartments with townhouses

There are 22 units on the one-acre site—17 onelevel, one-bedroom apartments and 5 two-level, twobedroom townhouses. And despite the relatively high density, the units have plenty of outdoor living because most of them face outwards from the top of a bluff which overlooks Newport (Calif.) Harbour. What's more, individual outdoor and indoor areas are relatively private because the units are staggered along two sides of the site. This arrangement reduces common wall areas, shields patios or balconies from neighboring units, and provides small shared entrance courtyards. Rentals at the project are from \$145 to \$230.

Honorable Mention. Architect: Robert E. Lee. Builder: Spar Construction Co. Location: Newport Beach, Calif.



LANDSCAPED WALK leads past small inner court to 44-car, sheltered parking aea.



RECESSED WALLS of these units near the formal entrance provide protection from sun.



PROJECTING WALLS between units increase privacy of outdoor living on two levels.


Photos: Marvin Rand



0 10 20 30FT

A three-level luxury project capitalizes on its prestige location

The three-levels—all identical to the plan above— let the developer put 15 two-bedroom apartments averaging 1,200 sq. ft. on a 65'x175' lot, formerly occupied by one house, in a high-income residential area. There is a parking garage on a fourth (lower) level and a community deck on the roof. Each unit also has a private patio or balcony off the living room and one bedroom. Individual entrances are along one side of the building, and upper levels are reached by stairways at both ends or by a central elevator. Rentals—from \$220 to \$250—include carpeting, draperies, heating, and air conditioning.

Honorable Mention. Architect: Pulliam, Zimmerman & Matthews. Builder: Leslie C. Watts. Location: Pasadena, Calif.



FORMAL ENTRANCE to project, raised above street, leads to side walkway atop garage roof.



SIDE BALCONIES on two levels overhang ground-level patios.



CANOPIED ELEVATOR opens to outdoors on three living levels.



INDIVIDUAL ENTRANCE leads to end unit (*shaded in plan, above*).



window wall at end of living area opens onto private patio.



This jury selected the 13 award winners

The jurors, who studied more than 100 townhouses and apartment entries in this year's Homes For Better Living program, were (*left to right*): James P. Gallagher, senior editor, HOUSE & HOME; Enslie Oglesby, AIA, Dallas; Chairman John L. Schmidt, AIA, director of architectural and construction research, United States Savings & Loan League; Herman H. York (*standing*), AIA, New York City; Claude Oakland (*seated*), AIA, San Francisco; Alan C. Borg, building editor, *American Home;* and Edmund J. Bennett, builder, Bethesda, Md.

CALIFORNIA where housing ran wild and wrote a warning for the nation's builders



[&]quot;STARTS OUTRAN THE BASIC REQUIREMENTS OF OUR RAPIDLY EXPANDING POPULATION FOR 21/2 YEARS"- HOUSING ECONOMIST, CONRAD JAMISON

Map's white areas account for 80% of the homebuilding in California. Graph, in thousands of units, shows how permits outran demand in early 1960s to bring downturn. Sources for the graph: California s&L League and Vice Presidents Arch C. Hardyment, research manager, Security First National Bank, and Richard S. Peterson, chief, national-regional research, Bank of America, Nowhere in the U. S. is housing's market research more sophisticated and its merchandising more skillful than in California. Yet California homebuilding came into 1966 with 100,000 more vacant houses and apartments than are needed for normal market turnover.

The surplus, combined with tight mortgage money, accelerated a skid in the state's housing starts, and now experts look for only 100,000 starts this year—two-thirds below the nearly 300,000 units of 1963.

What's more, there are other strong indications of California's housing troubles. Items:

• The Los Angeles metro area, formerly the national leader in housing starts, has tumbled to third place behind Washington and New York City.

• Tight money has crippled the state's used-house market, blocking new-house buyers who would trade upward if they could sell old homes.

• A steady influx of repossessions has depressed the FHA homes market. Consistent sales of 245 units a month have failed to reduce a constant overhang of 4,200 unsold units.

• The 204 state-chartered savings and loan associations had \$350 million worth of repossessions March 31. That is less than 3% of the s&Ls' specified assets, it is true, but it is an increase of 20% in three months.

• All 278 s&Ls lost \$126 million in savings in the first five months, although they stanched the outflow in June. Only by raising savings dividends to $5\frac{1}{4}$ % did they weather the first ten days of July, the post-dividend period when savings shop around for the highest yields.

The puzzler for housing men everywhere: How did California's savvy homebuilding industry get so thoroughly out of touch with its market?

The answer in a nutshell: overlending, overbuilding, and an almost mystic faith in population statistics that, at best, are turning suspect. Those three fundamental errors of practice and belief provide lessons for all builders and lenders because they reflect a basic lack of builder discipline and a failure by financial managers to police their own lending.

For a close look at what went wrong in California —and why—start reading at right.

The lenders' view: 'If you let them have the money, they'll build'

That's how President Bundy Colwell of the Colwell Co., in Los Angeles, probably California's most successful mortgage banker, explains the state's building spree. His stern judgment meets almost universal agreement among lenders.

"We all did it," says Charles E. McCarthy, vice president in charge of mortgaging for the Bank of America. "The s&Ls have teen the obvious overlenders because of their tremendous growth, but banks did it and the insurance companies probably did it too.'

The graph on page 82 restates Mc-Carthy's thesis. Obviously persuaded in 1963 that California's impressive growth and population statistics would turn even more spectacularly upward, the state's s&Ls raised their construction loans-the advances made to finance builders putting up new houses and one- to four-family apartment buildings-to \$2.5 billion, a 34% increase over 1962. The valuation of new private dwellings financed by all lenders (banks and insurance companies as well as s&Ls) leaped 25% to \$3.5 billion, and builders put up 290,875 new houses and apartments. It was California's biggest year, and starts topped 1962's total by 22%. But housing demand ran below the expanded rate of homebuilding.

PIATELLI CO.

Throughout the 1960s annual demand, built on population growth and demolitions, has remained virtually constant at about 220,000 units. Looking at 1963's 290,875 permits in that context, the Bank of America's chief of national-regional research, Richard S. Peterson, observes: "Probably three-quarters of the net increase of 100,000 vacancies was started in 1963."

And there were other warning signs, even in 1963. Southern California, which builds 65% of the state's new housing, lost 40,000 aerospace jobs that year. In-migration not only failed to turn upward; it may have begun to ease. ("Those optimistic population forecasts we've been making are all wrong," says President Ray Edwards of Glendale Federal S&L.) Yet it was not until 1965 that production finally fell below demand and home buying began to catch up.

Lending and appraisal abuses abounded among S&Ls in 1963

Those abuses were detailed in HOUSE & HOME's widely reprinted study of April, 1964, California's S&L Cliffhanger. The California associations, always high rate payers, increased net savings inflow to \$3.2 billion in 1963-up 25% by comparison with a 15% gain for s&Ls in the rest of the country. The increase generated tremendous pressure to put the money to work, and the s&Ls' total loans soared 37% to \$7.7 billion, even though former S&L Commissioner Frederick E. Balderston was about to warn: "Price inflation in housing has come to an end."

In most cases the faulty practices were due to inexperienced appraisers and to loan officers who could be manipulated by sharp builder-operators. In any case, the demand for production outgrew the ability to handle money.

Reforms came only after a Sacramento grand jury indicted one s&L president for illegal lending and demanded 17 fundamental changes in S&L policing regulations. The state subsequently instituted stricter appraisal supervision and, with the help of the California Savings & Loan League, wrote legislation bringing S&L holding companies under state audit control (News, July '64).

Some S&Ls also lost control of their checks on lending

And, Banker McCarthy now suggests, they did so without fully realizing it. S&LS had based their single-family conventional lending on an individual buyer's potential

> bids on land ordered sold by bankruptcy court.



After the boom, scattered signs of distress blossom in southern California



Photos: H&H staff

CALIFORNIA, continued

income, a highly effective guide. But California's housing mix shifted from 44% apartments in 1961 to 52% in 1962 and 59% in 1963. With multiples, the lending associations lost their close check on the prospect's potential income.

Bankers generally, some of them doubtless out of pure envy, blame the San Francisco Home Loan Bank's generosity for much of the s&Ls' overlending. The s&Ls argue that savings inflow, plus loan repayments and income from loan sales, covers most of their lending costs. Banks still point out that the Home Loan Bank pumped \$422 million into California in 1963 and \$464 million in 1964. It was not until this year (News, June) that the Home Loan Bank Board in Washington froze advances for speculative lending, and even then the San Francisco bank's loans to the industry continued to rise because S&Ls needed money to meet withdrawals.

Now FHA housing also has troubles: repossessions outstrip resales

The agency repossesses 265 foreclosed homes a month but only manages to resell 245, and its statewide inventory of unsold units remained above 4,200 for the first four months of 1966.

Vice President A. William Barkan of San Francisco's Wells Fargo Bank blames the agency's policy of 3% downpayments, instituted by Congress in the 1950s, for many of the repossessions.

"Buyers regarded their obligation simply as rent," he explains. "When they got tired of paying, they found it cheaper to walk away than to continue ownership. The practice was abetted by the mortgage secondary market, which bought the junk mortgages on these homes."

Yet FHA and VA together account for less than 20% of California realty lending and last year FHA took in only 6% of the foreclosures in Orange, San Bernardino and Riverside counties.

Tight money may be a blessing since it imposes some control on builders

The big money squeeze of 1966 has affected California homebuilding in ways not generally understood. It has probably helped, rather than hindered, the building industry by discouraging new starts and preventing additions to surplus.

"The current mortgage money shortage may prove to be a blessing in disguise," says Economist James C. Downs in a reference to San Diego that applies with equal validity to the state.

Yet tight money was not primarily responsible for the big cutback in starts.

"We are one state with a surplus," says

Economist Dougls V. Cannon of the San Francisco Home Loan Bank. "Even without tight money, we would build far fewer homes in 1966 than in 1965."

Credit severity is hurting in another way, though. President Howard Edgerton of California Federal s&L, the state's largest federal and the second largest association*, explains that it has choked off the resale market and prevented a faster reduction of unsold inventory.

"It's a vicious circle," he says. "The poor boy who wants to buy can't get the money by selling his old house."

There is also a widely held misconception in financial circles—the idea that the flight of "hot" Eastern money is causing the California building slowdown. That is not true.

In April, for instance, out-of-staters withdrew slightly less than 1.5% of their deposits in California s&LS. The ratio of total withdrawals to deposits was 2.2%. So Californians were withdrawing money faster than Easterners.

The basic cause of the overbuilding was too much money, too easily obtained and too freely dispensed.

These statistics show how California housing lost touch with its market





As the net increase in s&L savings tailed off, HLBB stepped up its advances to s&Ls (graph left). Despite the help, s&L construction loans may be off 75% from their 1963 peak (graph above). Much overbuilding centered in twoto four-family units, (top right). At the same time, California population growth dipped in reports by the state Finance Dept. (bottom right).



^{*} California has 204 state-chartered s&Ls that hold 67% of \$25.8 billion in s&L assets. The 73 federals hold 33%.

Most lending experts accept the secondary factors—low equity, lack of loan control—as lessons for the building industry. But they return repeatedly to easy money as the deepest root of evil. Even S&L leaders now concede errors were made. "Yes," says the Cal Fed's Edgerton "1963 was the year of the major mistakes. Competition for loans was severe enough to result in overappraisals. If everyone had his life to live over, we would all lend less in 1963."

The builders' view: S&Ls financed too many neophyte builders

"Frankly, we like to operate in a market in which every Tom, Dick, and Harry can't get a loan from an s&L and compete," says President Eli Broad of Kaufman & Broad Building Co. Broad has always prided himself in doing well in a falling market, and now is no exception: In the six months through May, K&B sold \$7 million of houses in four Los Angeles-area subdivisions.

As long ago as the fall of 1963, Broad predicted the red-hot Southern California housing boom would cool off (H&H, Oct. '63). Now, with his financing imported through Detroit and Eastern banks into 1967, he says his company "actually expects to benefit from the decline in housing starts, since the market demand is rapidly absorbing the unsold inventories of new homes and rental units . . Builders who have relied on savings and loan financing are now having serious problems as a result of the s&Ls' inability to make new loans."

Broad's attitude typifies that of most other large California builders, almost all with financial connections through banks and insurance companies.

They deeply resent the lenders' generalization that tars all builders with the same brush of overbuilding, and their resentment is tearing apart the easy relationship of former years.

"The use of federal funds in some statechartered s&Ls has been a disservice to the industry," says Builder John D. Lusk of Whittier, a former bank lending officer.

"If anything, this shows there is a big difference between builders. There are speculative builders who use various sources of financing and have kept their inventory under control, and there are builders who are no more than captives of S&Ls. And, if you notice, some s&Ls are getting into the tract business themselves because they can make 10% on the land development and 7% on the home loans.

"I've had many opportunities to buy into s&Ls—and you can't be in both businesses."

Builder Ben Deane of Huntington Beach is not so critical of the s&Ls: "We're aware of all the abuses, and you can certainly argue they [s&Ls] deserve no sympathy. But if they lose their place in the mortgage market, the building industry is in trouble all over the country—and especially here."

In spite of the s&Ls' money problems, most large builders interviewed by H&H are busily grading streets, pouring foundations, and opening new model home areas. And they say their unsold inventory is at a minimum. For instance, San Francisco's Henry Doelger, a 600-house builder in 1965, had only 20 unsold houses on hand last month.

All builders freely admit there was overbuilding in booming 1963, but each maintains it was the work of others.

"Those were beautiful days," says President James G. Pollard of the Building Contractors Association of California, "our industry was so promising that it attracted great numbers of people, some of whom were ill-prepared for their venture into homebuilding. At least modest success was virtually assured for anyone who had a reasonable grasp of the business."

Adds Market Research Sanford Goodkin: "The majority of [unsold] inventory was made up of products that had weak marketability. They should never have been built, even if there were a proper demand. Many lenders were careless, as evidenced by the high percentage of scheduled items on their books."

"Internal momentum and lead time accounted in part for the substantial overbuilding in 1963 and 1964," says President Harrison Price of Economic Research Assocs., whose clients include Disneyland, Transamerica Corp., and the Irvine Co.

Neophyte builders splurged on duplexes and fourplexes

By all counts the outpouring of duplexes, triplexes, and fourplexes in California's 1963 boom was awesome. It accounted for 17% of permits in the state's seven largest met areas—nearly double the national share (*see graph*). In fact, these seven areas built an astonishing 37% of all the two- to four-family dwellings in the nation that year.

Now these small-scale rental units are turning out to be the biggest headache, according to Executive Vice President William Lund of Economic Research Assocs. Southern California's high apartment vacancy rate is "skewed by the fourplexes, plus the dingbats and slums," says Lund. "Demand was—and is—strong for apartments at under \$90 a month or over \$135. The glut was in the \$110 monthly range the market was overbuilt by a factor of four." And this is the market in which most duplexes and fourplexes compete.

In some instances, entire tracts of four-

plexes went up. Some were rented, some sold to owners who would live in one unit and rent the remaining three—a typical mom-and-pop arrangement for landlords unable to hire professional managers.

Meanwhile larger apartment complexes came on the market. Result: Apartment vacancies climbed from roughly 10% early in 1963 to a high of 16% in September 1965.

Real Estate Market Analyst Jack Leonard of the Bank of America de-emphasizes the role of two-to-four-family units. "We haven't found a big vacancy factor in these units," he says. "The bigger developments with 10 to 50 units are the ones still standing with vacancies, especially in the higher rent range."

Soaring land prices forced builders to overprice their housing

Skyrocketing land values were a fact of life in California's housing industry. Fastturnover speculators abounded, and some companies turned land speculation into a semi-scientific art (News, Sept. '65).

The high prices—as much as \$40,000 an acre—led builders to use higher-density plans or increase house prices. Either way, most builders now agree, a significant number of potential buyers were lost.

Today land prices are still high: Finished lots range from \$5,500 to \$9,500 in southern California, and one-family houses are seldom found under \$21,000. So buyers must earn \$700 to \$800 a month.

Just when builders banked on faster population growth, it slowed down

The boom year of 1963 also turned out to be the peak year in the past decade's rate of population growth. But the ebbing tide caught builders unaware.

The downturn—from 612,000 in 1963 to 549,000 in 1965—is only now surfacing in estimates of the state Finance Dept. and federal Census Bureau. But state demographers have just estimated a slight rise to 563,000 for the year ending in June.

Significantly, the bulk of the downturn centered in six big southern counties, where the annual rate of growth fell from 361,900 in the July 1963 year to 301,000 in the July 1965 year. The drop cut annual housing demand by some 16,500 units, a fact that builders now rue.

One result of slower population growth has been slower land sales. Builders are no longer bidding up the price of land for tract houses: "The prices are firm but the terms are soft," says Eli Broad.

The key lesson: 'Homebuilding needs a fundamental discipline'

So says William R. Mason, new president of the 88,000-acre Irvine Ranch, one of the few companies that plans its communities for years before letting builders put up a house.

"That discipline has to come at the lender level," says Senior Vice President William R. Schroll of the United California Bank in Los Angeles. "I have never felt we should expect them [the builders] to exercise the proper control."

California homebuilding's bitter experience in the midst of an expanding general economy also provides three other lessons for the whole U.S. housing industry:

1. Even the best local market research must be improved

California boasts some of the most sophisticated market researchers in the business. In addition to a host of private consultants, builders and lenders have formed two research organizations: the Northern California Real Estate Research Committee and the Residential Research Committee of Southern California.

Both committees issue sophisticated and comprehensive reports on their market areas every three months. But even their best was not good enough to alert builders and lenders to overbuilding.

Perhaps the weakest link is in population estimating. California's Finance Dept. maintains a cadre of population experts to chart the state's explosive growth as precisely as possible (because state tax dollars are apportioned by population). Those experts noted a slight downturn in population growth after 1963. But the bald figures (see above) may not reveal the full impact on housing. Reason: outside experts suspect-but can't prove-that

lower-income families (hence not buyers of new houses) account for a growing share of California's in-migrants.

The federal Census Bureau added to the confusion last month by estimating the 1960-to-1965 growth of 13 counties (with two-thirds of state residents) at 12% (or about 53,000 persons annually) below the state Finance Dept.'s figures.

The state and federal experts have differed before, and the state's men have proved closer to the true population picture. A major reason is the state's power to compel cities to perform actual census and vacancy counts.

Whichever estimating team is correct, there is another fundamental problem: "Perhaps more important than the accuracy of population estimates is the fact they tend to have a three to six month historical lag," says Economic Consultant Harrison Price

How California saved an S&L—and public confidence

The last-minute rescue focused the attention of most of the \$27-billion California s&L industry on the office of s&L Commissioner Gareth M. Sadler.

Sadler was under tremendous pressure to settle the affairs of the deeply troubled Van Nuys s&L Assn. before July 1, the date that savers often collect half-year dividends and switch deposits for higher yields. Both the industry and its state supervisors recognized a danger greater than loss of Van Nuys' \$120-million savings, a mere $\frac{1}{2}$ % of the state s&L's assets. Any individual s&L's failure could well undermine confidence in the entire industry in the critical days when it was trying desperately to hold savings accounts.

"It was a psychological deadline," said Sadler's assistant, William F. Harrison.

Months of concern. As early as January Wall Street had heard reports of difficulty at Van Nuys, a subsidiary of Trans-Coast Investment, an S&L holding company. By March 31 Van Nuys' scheduled items-the index by which California measures the risk potential in mortgage portfolios-was 24.16% against a statewide average of 5.65.* Van Nuys had \$50 million in foreclosures and owed the Federal Home Loan Bank another \$50 million. Merger talks were already under way with United Financial Corp., a Los Angeles holding company partly owned by Home

*President Howard Edgerton of California Federal s&L, the state's largest federal, and several other s&L leaders deplore the tendency of financial writers to represent scheduled items as an index of potential loss. "Nothing could be further from the truth," he says. "Maximum potential loss will not exceed 20% of the book value of the items."



s&L President Howard Ahmanson, the

giant of the industry. But late in April a newspaper story de-

tailed Van Nuys' troubles, and savings were withdrawn in heavy volume.

Time now became paramount. Because the Federal Spence Act bars holding companies from acquiring additional s&Ls, United would have had to take months to reorganize as an S&L itself in order to buy Van Nuys. It dropped the project.

Late hours . . . and waiting. The new campaign to save Van Nuys was Topic A in statewide financial circles when HOUSE & HOME staff members Ken Campbell and Ned Rochon arrived in San Francisco June 26 to research the accompanying California report. A phone call advised them that the busy Sadler could be seen at 4 p.m., June 28. Rochon cut short his San Francisco visit to jet to Los Angeles, only to find the commissioner tied up in emergency session with two dozen s&L leaders who had agreed to bid for some or all of Van Nuys' assets.

"I can't ask you to wait," said Sadler, ducking out for seconds. "It may go on

quite awhile." It went on until 2 a.m.

Sadler and his staff were also up until after midnight the next night, and on June 30 financial reporters waited through the day for the announcement. But afternoon editions closed in New York, and then in Los Angeles, and there was still no word from Van Nuys. Editor Rochon, racing by helicopter to keep another appointment, landed on the Ambassador Hotel lawn next door to the commissioner's office, only to be told that Sadler had left seconds earlier for Long Beach and a lastminute conference.

And then—Wellman. By now news was leaking. Charles A. Wellman, former president of First Charter Financial Corp., a holding company, would become president of Equitable s&L in Long Beach (assets: \$175 million). Equitable would buy \$100 million of Van Nuys' prime loans and \$20 million in cash and facilities. Equitable would pay nothing, simply assume Van Nuys' \$120-million savings liability. Van Nuys would retain \$60 million in real estate and delinquent loans and would cease to solicit savings.

"A very sensible solution," said the bonetired Sadler when he finally submitted to quesitons. "It's a better answer than any rhetoric. I think people ought to stop worrying about this business."

Then he released the official news to the press. It made the late morning editions-dated July 1.

*Other recent mergers: Arrowhead S&L of San Bernardino, scheduled items 17.4%, into Howard Ahmanson's \$2-billion Home S&L, with 3.97%; Charter S&L of Bellflower (27.5%) into Belmont S&L, Long Beach; Corona S&L (18.36%) into Southwest S&L, Englewood Englewood.

of Los Angeles. Neither Price nor other market researchers have yet come up with an answer to that one. And other data gaps are cropping up, too:

Vacancy counts are still subject to error. As an indicator of apartment vacancies, the southern research group reports idle electric meters in suburban and urban apartment neighborhoods. The state's experts say idle meters are only a rough guide.

"Our actual counts show it can vary all the way from one to 3¹/₂ vacant units for one idle meter," says Demographic Analyst Richard Irwin. "The average is two for one."

"That's true," says Southern Research Chairman Jack Leonard. "But if you look for trends in idle meters, it works."

Measuring unsold-house inventory is still cumbersome. The Southern California committee, again working through its electric utility, has developed a count of electric meters installed but never operated as a rough way of measuring completed but unsold houses. But this seems to have some margin for error, largely because meters are seldom installed until the builder has a firm buyer.

FHA, growing into a statistical service for the housing industry, each year counts the unsold houses in tracts with more than five houses. But such counts lag because they can be made only infrequently—every six months at best.

2. Used-house sales are more important than builders had suspected

California vividly demonstrates how dependent today's builders are on the usedhouse market.

"The entire market hinged on a family move every three years—buyers could pyramid their equity," says Marketing Vice President Michael Tenzer of Larwin Companies. "Now they can't sell their houses as readily—and it costs 16% or 17% to sell. The real crux of the problem is the lack of equity when they pay the costs of a real estate brokerage fee and perhaps six to eight points on a mortgage to the buyer of the used house."

The used-house slowdown is massive. Applications for FHA insurance, the best way to sell a used house, plunged 31% through May statewide. At the same time many S&L builders switched to FHA financing for new houses. So FHA new-house applications dropped only 3%, and FHA starts actually increased.

In both northern and southern areas deed recordings are off about 30%, and President Sid Wallace of Medco Realty and Management Co., of Los Angeles, the sales arm of Willens & Bertisch, a general contractor and homebuilder, says, "We have practically halted sales of used houses." To make sales, some owners must take second mortgages for part of their equity, leaving them cash-shy.

Wallace says tract builders and real estate agents have split into two camps: "Between these two there is fear and animosity. It's two markets. But it should be one integrated market."

Wallace is trying to combat the usedhouse slowdown by inviting 15 builders in the Woodland Hills section of Los Angeles to set up a cooperative sales office. Eight builders and three area realty concerns have shown some interest.

Cooperative sales efforts are in the forefront with other builders, too. Last month southern California's biggest builders— Ben Deane, Ray Watt, and Lawrence Weinberg—joined in a buy-now ad campaign. And in June five builders—George Holstein, Lagerlof Construction, Country Club Homes, Green Valley, and FWHL Co.—jointly built a 15-house model home area called Dream Street.

More builders are also using trade-in plans. The plans let buyers move out of their old houses with ease, but they can recover no more equity than by reselling through normal channels.

A few builders are considering paying part of the FHA discount on an existing house for prospective buyers.

3. The best cure for land speculation seems to be a soft housing market

In the frantic building boom of 1963, land prices skyrocketed far faster than other building costs: builders were asked to pay \$35,000 and \$40,000 for subdivision land, more for apartment sites.

The epidemic of price rises focused attention on land assessments, and in Orange County a study found vacant land paying far lower taxes than land occupied by new houses or apartments. Reform pressure built up and this—plus a scandal in three major cities (NEWS, July)—combined to force a reform bill through the state legislature. The measure, just signed by Gov. Edmund (Pat) Brown, requires all property to be assessed at 25% of value.

But the slowed-down housing market has put the fast-turnover land speculators out of business more effectively than any assessment reform.

Today zoned apartment land is so plentiful its price has weakened in southern California. Prices of tract-house land are still firm, but "you can dicker on terms," says one builder, simply because onefamily homebuilding has come through the wringer as the most solid segment of California's housing market.

A bright tomorrow—in '67 California should be moving again

The golden promise is still there. But economists lean to caution in their predictions, if only because this time they want to be sure builders heed the warnings.

Says Security First National Bank's Vice President Conrad Jamison: "The surplus has leveled off. The worst is over, [but] there is no economic basis for a significant recovery of residential building in the months immediately ahead... A year from now the industry could well be in a position to move ahead again strongly."

Vice President Paul O'Brien adds: "We've taken our medicine. The patient has a bright color, and the future—beyond 18 months or so—looks excellent."

The Bank of America's Peterson is even more optimistic. With housing's annual rate already running 25,000 units below 1965, he says "it is likely that 60,000 to 70,000 vacant units can be absorbed in 1966. If the trend continues, residential building can be more responsive to the basic underlying growth demand in 1967 than at any time in the last $2\frac{1}{2}$ years."

The big opportunity: studies hint it still may be in apartments

Peterson allows for an overall population slowdown but says the growth of households will not slow as much as the rate of population increase. The fastest growing age group in the next five years will be the 20-to-40 segment, and the economist finds that the impact of this group's family formations, when combined with rising incomes and the higher homereplacement demands generated by urban renewal planning, will boost basic housing demand to 240,000 units a year from 1967 through 1970.

And as just one little example of the opportunities awaiting tomorrow's careful builder, Researcher Phil Sterling of Economic Consultants Inc., a Los Angeles housing study service commissioned by banks and s&Ls, has this to say about Los Angeles County's multiples:

"Of the 800,000 units, 11.5% were vacant in April 1965; 10.4% in January 1965 and only 8.5% in June 1966. By December that will be down to 6%, probably the lowest point needed for normal turnover.

"So we'll have a roaring demand for multiples in the next year or so. The trend is in that direction. The nation's 20-to-29 age group increased only 2.9% from 1960 through 1965; it will increase 6% from 1965 through 1970, and it is this group that needs apartments. Come on out."

Can production-line methods put profits in rehab jobs like these?

Government housing agencies are hoping the answer is yes. For a year and a half they have been betting cash and time on the premise that remodelers' technology can be so radically improved that even slum rehabilitation work will become a safe, profitable investment.

Housing agencies want rehab to pay off because they want more remodelers to tackle it. Why? Rehab eliminates substandard housing in two to four months, while urban renewal the alternative—takes years.

But bringing production-line efficiency to remodeling work isn't easy. In New York City, where the effort is now concentrated, there have been storms of publicity about how the streamlining could be done—but few results.

And the New York experimenting isn't lacking in money or talent. Three big building-materials manufacturers—Dow Chemical, U.S. Gypsum, and U.S. Steel—are working with Tishman Realty and Construction Co. to find better remodeling systems using their products. And a young innovator— Conrad Engineering—is trying out a spectacular new component idea backed by a \$390,000 grant from HUD.

The spectacular idea—which the press jumped on a few months ago—is this: Cut an 8'x8' shaft through the roof and floors of a multi-story tenement, and drop in mechanical cores containing kitchen, bathroom, heating, and hot-water equipment—a core at each floor, stacked one above the other.

But the core, and several other ambitious proposals, have been slow to materialize. U.S. Steel helped to design and build the first version of Conrad's core (H&H, June), but shortly before it was to be tested, the steel core was shelved. And out of a host of suggestions for faster rebuilding of floors, walls, ceilings, and windows, only one—a lower-cost floorleveling system—has proved to be a significant step forward (pp. 90-91).

Whether more of the New York experimenting pays off or not, the lesson is already clear: Remodeling work can be systemized and standardized, but not in radical ways. The production-minded remodeler who thinks small is the one who will increase his profits.

HOUSE & HOME got this reading after visits to three leading remodelers in three big cities. One of them is a manufacturer involved in the New York slum experiments. The other two are remodeling pros in completely different price ranges. Their ideas—starting on page 90—show how far remodelers can go in streamlining their technology.



PHILADELPHIA ROWHOUSES are completely redone and sold as public housing for \$12,000. Remodeler: Hertzfeld & Horowitz Assoc. For construction details, turn to pages 90 and 91.











CHICAGO FRAME HOUSE, a higher-cost custom job, was jacked down 3' and heavily altered. Remodeler: Old Town Contractors Inc. For Old Town's production methods, turn to page 92.

NEW YORK TENEMENTS, a rehab experiment, get all-new interiors for \$9,000 per apartment. Remodeler: U.S. Gypsum Co. For details of usg's experimental approach, see pages 90 and 91.





An innovating manufacturer's approach—screwed-on drywall

Production-line rehab works best on low-cost housing in big volume

Low-cost work lends itself to systematizing because floor plans and finishing details are standard from one unit to the next. The two jobs pictured at the right are good examples.

One is a row of six-floor, 24-apartment tenements (*upper photos*) in New York City's Harlem; the remodeler is U.S. Gypsum Co., working through a local contractor. The other is a narrow street of two-story-plus-basement rowhouses (*lower photos*) in Philadelphia; the remodeler is Hertzfeld & Horowitz Assoc. In both cases, the buildings are completely gutted and given all-new interiors for a construction investment of about \$9,000 per unit.

But the production methods differ because one job is experimental and the other is strictly an investment. U.S. Gypsum is seeking ways to apply its materials more efficiently to remodeling. Hertzfeld, selling to the Public Housing Administration, sticks to PHA's building code.

U.S. Gypsum's greatest success so far has been a mastic topping for leveling floors—a cheaper method than laying a sheet subfloor and then shimming. Old sagging floor joists are systematically straightened by new party walls (*plans*) to lift floors to near-level; then the topping is troweled on, bringing the floors to final level. For walls and ceilings, U.S. Gypsum uses drywall on metal furring, but is also going to try a new prefabricated partition system (*drawing*, far right).

Windows have been a problem for U.S. Gypsum because it is leaving the masonry facades of its buildings undisturbed, except for painting. So to avoid leaving gaps that have to be patched, old window openings are being filled precisely with expensive custom-made windows. A possible solution, says U.S. Gypsum: a stock-size metal window with expandable fillers at top and bottom.

Hertzfeld is already using stock windows. Sizes are available that fit the old openings precisely in width, but must be filled at top and bottom. However, Hertzfeld covers the old building facade with stucco, so rough patching around windows is no problem.

Hertzfeld also manages to apply a few other stock components: prefabbed stairs, prehung interior doors, and wrought-iron stair-rail sections.



STANDARD LAYOUT for six floors of apartments is arranged so new party wall doubles as center bearing wall to raise sagging joists. All floors are gutted; then joists are raised a floor at a time, starting at street level.

A private investor's approach-troweled-on cover-ups for



TIGHT LINEUP of narrow rowhouses is ideal for production-line work. Remodeler's ten-man crew works on 20 houses at once, which keeps subcontractors busy with no more than one trade in a house at a time.



ALL-NEW PARTITION LAYOUT goes exactly like new construction. Old plaster on party wall, right, is covered by new plaster after metal lath is attached by 2" shingle nails driven through old plaster into brick wall.

for walls and ceilings, troweled-on mastic for subflooring

Photos: Richard Gray



MASTIC SUBFLOOR of gypsum cement, asphalt, and sand can be troweled on to existing floor boards for 37ϕ a sq. ft. Vinyl tile goes on top,



LOADBEARING PARTY WALL serves to level floor above by raising joists. Photo shows partywall soundproofing and new ceiling furring.



METAL CEILING CHANNELS are nailed, with shimming, to old joists. Drywall is applied with self-tapping screws driven by power screw gun.



METAL WALL FURRING is nailed directly to old brick side wall. But when heavy shimming is required, wood furring must be substituted.



EPOXY WALL FINISH puts a durable surface in public halls. Before epoxy is applied, wall is stripped to brick, skim-plastered, and painted.



STUDLESS PARTITION PANELS prefabbed of ribbed gypsum will be tried, but variances in floor and ceiling level pose a big problem.

inside and outside walls, windows and doors in stock sizes



STUCCO COVER-UP, instead of patching, eliminates all defects as well as ornamentation in old brick facade. Lath is attached to brick with masonry nails and three coats are applied: scratch, brown, and finish stucco.





ECONOMICAL WINDOW SWITCH makes use of stock-size window which fills width of opening. Bottom gap is filled with masonry, top gap with insulation and paper. Work can be rough because it will be stuccoed.



PRE-HUNG DOORS are used inside, but because old outside door framing and thresholds can often be saved, exterior doors are job-hung. Prefab wrought-iron railing (left photo) is preferred to wood because it saves time.

Production-line rehab works on higher-cost jobs—if it's flexible

But developing any kind of standard production system for the middle- and upperincome remodeling market is tough. Customers' tastes and one-of-a-kind jobs tend to rule it out.

Five years of trying have paid off, however, for Remodeler John Halligan in Chicago's famous Old Town area. Halligan's Old Town Contractors Inc. does close to \$1-million worth of remodeling annually —contract work plus apartment work for his own investment company. Construction cost per unit ranges from \$7,000 to \$15,-000, but sometimes the sky's the limit.

Halligan caters to above-average tastes, and his work shows it. He preserves the charm of old buildings and blends it with new, clean-lined interiors. Yet, he manages to apply standard production economies on every job.

Halligan systematizes construction. He handles trim in several different ways from junking to refinishing—so each piece on a new job is color-keyed with a paint mark to tell carpenters what to do with it. Old baseboard is pulled off right away the space behind is a made-to-order raceway for new wiring. Old lath isn't stripped, and electricians don't cut wiring channels in it—they fish the wires instead.

Halligan systematizes finishing. All trim is stripped from around windows and doors, and new plaster is applied flush with the openings. Old doors are modified to suit modern decor by gluing on new veneers. New woodwork is blended with old restored wood by staining and waxing —not varnishing. Walls in high-use areas are covered with durable canvas-backed vinyl.

Halligan improvises and, in doing so, discovers new systems. He stocks a warehouse full of stained-glass windows, wrought-iron fencing, oak doors, and such oddities as church pews and 1,500-lb., cast-iron lamp posts—all salvaged from demolished buildings. Put to use, these antiquities become the trademarks of Halligan's jobs. Experimenting with T-astragal molding strips, he discovered an excellent way to make a luminous ceiling grid that can be stained to match kitchen cabinets (photo, far right).

But none of Halligan's production systems would pay off without meticulous planning. To see how he replans old buildings, turn the next page.

Production economies don't show on this job-

Photos: Donna Lee Johnson



METHODICAL JOB-STRIPPING gets rid of unsound plaster, but old wood lath is removed only when new insulation is necessary, as in ceiling of top floor apartment, above. Unusual old windows are carefully saved.



CLEAN-LINED INTERIOR—no trim around windows and doors—is economical and blends well with restored details like old stained window. Plaster is standard for Halligan: it conforms to any irregular wall.

but the money they save shows up in finishing extras the customer can see

Photos: Oscar & Associates



PRE-MARKED OLD TRIM—it's squirted with paint-spray can—tells workmen how to treat it. Different colors mean 1) leave in place 2) remove for use elsewhere in house, 3) save for warehouse stock, 4) discard.



ROOM-LENGTH WIRING CHANNEL is easily created by removing old baseboard. Channel is later covered by 1x6, plus quarter-round, or 1x8 milled to any style. Every job gets a telephone to speed communications.



JOB-LAMINATED DOOR FACING of birch or walnut plywood converts one side of raised-panel door to flush style, so same door blends with both restored floor and stairs in public hall and modern apartment interior.



LOW-COST WINDOW ADJUSTMENT.—applying new stops to double-hung sash—restores smooth operation to old window and avoids replacement. On high-cost jobs, Halligan may save unusual old glazing and build new sash.



EXTENSIVE WIRE-FISHING behind old lath and plaster avoids extra work of cutting and refilling channels for switch and fixture boxes. When placing ceiling fixtures, Halligan's electricians fish wires up to 50'.



VERSATILE ASTRAGAL MOLDING.—normally used on double doors to conceal center seam—is adapted to luminous-ceiling grids, stained to match kitchen woodwork. Halligan uses T-astragal, rips off one flange for border.



Photos: Oscar & Associates

Stickler for planning: How this remodeler packs profitable rental space into cramped old houses



SCALE-MODEL APARTMENT helps Halligan work out his ideas and lets clients understand plans quickly. Room colors are pasted on walls of model.

"Space in old houses is critical. Replanning it always brings you back to the same problem: How hard can a room be squeezed?" So says Remodeler John Halligan (*see p. 92*), who is pictured above with his key planning tool: a cardboard scale model with walls joined by specially designed fasteners. Halligan manipulates the walls like a jigsaw puzzle to find space for the luxuries of modern-day living in buildings that were never designed for them. He also pastes in room colors and arranges scale-model furniture to make sure the rooms are large enough.

Halligan has a vast store of space-saving ideas. One of his latest: Remove the first-floor exterior wall of an old building and rebuild it several feet back from the sidewalk. Result: a setback for a small entry court. Another idea, not yet perfected: Install movable partitions so an apartment layout can be changed to suit different tenants' needs.

But Halligan's most important space-savers involve storage. In the three-floor job shown at the right, he had to deduct 9' at the second floor for a public stairway and inside hall. The floor is only 16' wide, so that left a 7' width for kitchen and bathroom. The tricks he drew on to solve this and other space problems are shown in photos on page 96 and 97. Here's how Halligan worked three big apartments plus stairs into 16'x57' floors





BEDROOM B DINING

BEFORE A SECOND FLOOR

AFTER





Photos: Donna Lee Johnson



WELL-PRESERVED EXTERIOR OF rough-cut stone (*above*) required no cleaning, but the frontyard was dressed up (*below*) by adding better wrought-iron fencing and laying paving blocks—both from Halligan's warehouse. Front steps were replaced by jacking up old railing posts and pouring new concrete under them. The big change was inside (*see floor plans*).



STICKLER FOR PLANNING continued

Halligan's space-saving tricks range from cupboards in soffits to shelves behind heaters—





PACKED-IN EQUIPMENT includes a mechanical work center recessed in countertop, left, undercounter lighting, and a radio-intercom.

SOFFIT STORAGE makes fullest use of a compact corridor kitchen (a color-coordinated step ladder is included). Another important space-saver: an under-sink dishwasher—located under one side of a double sink so the housewife can conveniently rinse and load her dishes.



POCKET DOOR—a natural space-saver—is planned into virtually every job, particularly in tight kitchens that open off narrow halls.



BUILT-IN WARDROBE fills one bedroom wall but is finished to look like furniture. Bifold luan doors are enclosed with matching paneling.



OVERHEAD STORAGE is built into foyer closet of top-floor apartment. Old partitions were removed from stairwell to create visual space.

'You've got to pack in storage space but create open space at the same time'



HINGED COUNTERTOP over low toilet tank allows for plumbing maintenance and permits counter to be built at same level as vanity top.



COMPARTMENTED BATHROOM makes the most of 8'x9' space. Soffit furred down over dressing table and tub helps create separate areas.



COMPACT HEATING UNIT fits into vanity front and is shallow enough so storage space inside vanity need not be sacrificed.



CLOSE FITTING results in fully equipped bathroom in odd-sized space—5'x11'. All fixtures are on one wall, divided by enclosed tub.





Raphael Dufault, New Britain, Conn.: "I've found total electric homes mean total customer satisfaction."



Burton Reiner and Charles Bresler, Washington, D. C.: "Electric heat surpasses anything on the market."



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Ernest W. George, Milton, Mass.: "For extra sales appeal, I now specify flameless electric heating."

"Electric heat offers the 'modern

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Charles A. Mueller, Atlanta, Ga.: "We give customers what they want -and now that's electric heat!"



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Jim Carrier, Atlantic City, N. J.: James Huff, Par

James Huff, Parkersburg, W. Va.: "When homes feature electric heat, selling them fast is no problem."

Bob Appel, North Aurora, Ill.: "Beyond any doubt, electric heat is the best new sales feature in years."

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NAHB's Research House VI near Washington, D.C., is a compendium of the latest and best ideas for making homes better, *and more salable*. Its most prominent exterior and interior material is brick.

The front elevation of the Research House is dominated by unusual, four-inch-thick loadbearing brick wall enclosing the carport. It gives approach to house distinction and elegance.

Designed as series of "U" shapes, wall provides utility, economy, and great visual interest. Wall supports roof; interiors of "U's" furnish handy storage space inside carport. Portions of wall are pierced-brick screens whose openings and projecting header courses create dramatic beauty and interest. A single wythe of brick was used in this extremely simple wall which needs no interior or exterior finish: Economy, in both materials and construction, is the result.

Other unusual brick usages: Reinforced Brick Masonry (RBM) retaining wall across front of house on lower level.

Wall is exposed on interior; above fireplace in living room a decorative pattern is created by projecting brick four inches from wall and then alternately projecting and recessing header and stretcher courses one inch. Brick wall flows out from both sides of fireplace, unifying living room, atrium, den, and patio. A 20-inch-wide brick bench is cantilevered from wall.

These are unusual brick usages, yet they are easy to plan, simple to execute, and inexpensive to build. Any home builder can use brick in the same ways, or adapt these ideas to his own needs. Write for drawings of these details in NAHB Research House VI.



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> 16d box nail, $3\frac{3}{2}$ " x .135" (10 ga.) shown actual size above. Also drives 16d sinker nails, $3\frac{3}{2}$ " x .148" (9 ga.), right, and 16d common nails, $3\frac{3}{2}$ " x .162" (8 ga.). Nails conform to Federal Specification FF-N-105a, Interim Amendment-2, April 7, 1964.

The Stallion grew from Paslode's widely used Gun-Nailer® tool that drives 8d and 6d nails the *first* portable pneumatic nailer to drive regular nails. Paslode's unparalleled experience in this field plus our 30 years of experience in making industrial staplers is a positive assurance of performance.

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Builders prefer House & Home whether they build five hundred houses a year, or five

Size of outlook, not size of operation, determines builder interest in House & Home. Builders big on ideas, whether they build five hundred houses a year, or five, read and prefer House & Home.

Things builders haven't seen, ideas they haven't had, improvements they might never have thought of, these are the editorial elements of House & Home. It's the size of the problems they are designed to help solve that are big.

Good design is as important to the builder of five houses as it is to the builder of five hundred. So is product information. So are building codes, technological developments, construction loans and mortgage money, sub-contractor arrangements, market trends and sales.

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WOOD-SHINGLE FIRE TESTS include contact with burning brands (left) after exposure to sun and rain.

Fireproofing wood shingles—can it be done?

So far, the answer is still no. Reason: no economical fire-retardant has yet been found that can withstand the effects of rain—it leaches out the chemicals. But within the next five years—as soon as the U.S. Forest Products Laboratory completes a new series of shingle weathering tests—the answer will probably be yes.

Forest Products Lab has put 18 fireproofing treatments through a preliminary 28-day outdoor exposure test, and 12 have passed. While they are just at the beginning of an exhaustive testing program, at least two of the treatments show particular promise: 1) a synthetic resin system originally developed for fabrics, and 2) zinc borate, which is formed by combining two solutions in wood and is insoluble in water. Other possibilities: fire-retardant paints, and new fertilizers.

Plywood producers advance toward a single glue line

Today there are two glue lines—waterproof phenolic resin glue used in exterior plywood, and non-waterproof protein glue used in interior plywood. But in the near future, all plywood—both exterior and interior—will probably be made with the waterproof glue. Reason: Builder demand for exterior plywood has increased so sharply in recent years that it accounts for about half of total plywood production.

Here are some examples of how strong the single glue-line trend has become:

1. All the new plywood plants in the Southern pine region use only the phenolic resin glue line.

2. All structural plywood used in Los Angeles is now required by code to be produced with the waterproof glue line.

3. Distributors in Hawaii now sell nothing but waterproof plywood.

Having only one glue-line choice will simplify a builder's plywood purchasing, but won't it raise his plywood costs? No, says the plywood industry. While the cost differential between waterproof plywood and the interior type is now about \$5 per thousand sq. ft., the industry expects this would be eliminated by the production economies in adopting one glue line.



Want faster cost estimates for electric heating? Check this new computer

A heating salesman twists the dials, turns a switch, and the meter instantly tells the story: 1) how much heat loss—in kilowatts—to expect from a given house and 2) how much it will cost to heat the house annually. The briefcase-size computer works off house current or a car battery, and costs members of the Electric Heating Assn.—which developed it—under \$100.

The dial settings (close-up photo above) feed the computer the following thermaldesign data about a house: square footage and insulation ratings of windows and doors, walls, ceilings and floors; and whether the house is over vented or unvented crawl space, over a basement or on a slab. Besides registering heat loss and operating cost, the computer permits a fast recalculation to show how much heating costs could be reduced by heavier use of insulation, storm windows and doors.

These five builders tell how they cashed in on Honeywell **Electronic Air Cleaners**



"Control panel is a talking point"

Mr. Richard H. Wieland, Builder of Brookwood, Prince Georges County, Maryland

"We featured the Honeywell Electronic Air Cleaner in the 1963 Parade of Homes. Now, it goes in about half of our homes. Most people do not know about electronic air cleaning, but they do know about air pollution, and they react favorably when we go into a little sales pitch. "We sell the air cleaner as

part of Comfort Conditioning along with a humidifier and air conditioning. We don't intend to make a big profit on the air cleaner, but feel it is important because it helps make our homes more saleable. We believe electronic air cleaning is on the increase and will feature it again in the 1966 Parade of Homes.'



"We give the best, Electronic Air Cleaner is standard" Mr. Lee Rosenberg, Panitz & Co., Inc. Builder of Rumsey Island, Joppa, Maryland

"Rumsey Island, along with our other development, Joppa Town, is a planned community where every home has direct access to Chesapeake Bay through a series of canals. Our people are the type who like to come home and jump into their boats. Minimal housekeeping is important and the Electronic Air Cleaner is a strong feature for our homes.

"We don't believe in extras. All homes have a system that includes air conditioning and electronic air cleaning, a humidification system, and a central vacuum cleaning system. Our homes are more saleable because they have a sophistication that others don't offer. We feel that all homes should get to this point."

"A big hit...90% order it"

Mr. Manny Barenholtz, Developer of "Four Seasons," Cleveland, Ohio

"Builders have to realize that the Honeywell Electronic Air Cleaner needs an explanation. We use a very short, soft-sell presentation with a pamphlet supplied by Honeywell. The customers understand very quickly and 90% of them have installed the Electronic Air Cleaner since we began featur-ing it in 1965. "We use the Honeywell Elec-

tronic Air Cleaner to help sell the whole house. We were the first builder in our area to in-clude it as standard equipment, and it gives us a real edge over the others. However, I believe eventually the Honeywell Electronic Air Cleaner will be as normal as a bathroom."





"Our house of the future includes clean air"

Mr. Theodore H. Bentley, Builder of Hollywood Highlands, Hollywood, California, and creator of the "SteelStone"[®] concept in tract housing

"Our house is the first really new house in Southern California since the adobe. My Associate, Chester Groves, and I use the 'Steel-and-Stone' method of construction like high rise apartments for a home that is fireproof; earthquake resistant; rot, vermin and termite proof; and should last 100 years. Our house will not become obsolete. Naturally, air conditioning is standard, but why cool dirty air? This is the smog capital of the world. I won't add frivolities, but the Honeywell Electronic Air Cleaner is functional, as well as a status symbol. It's all part of the 'home-of-the-future' concept and it really sells homes."



"Put it in a Comfort Conditioning Package"

Mr. Marco Santi, President of Marco and Soave Co., Warren, Michigan

"We like to compare the Electronic Air Cleaner to power steering in an automobile. People really appreciate it when they have it, but they wouldn't pay to have it installed after they own the car. We make the Honeywell Electronic Air Cleaner part of a Comfort Conditioning package that includes Thermopane glass, 3" insulation, marble window sills and an Electronic Air Cleaner.

"It's all or nothing and most buyers take the whole package. They respond to appeals for health and cleanliness. They easily understand electronic air cleaning. It helps sell our houses without over pricing them."

Honeywell Electronic Air Cleaner removes 95%* of the dust, dirt and pollen passing through it

The Honeywell Electronic Air Cleaner fits in the return air duct of any forced air heating-cooling system and traps up to 19 times as many particles as ordinary mechanical filters.

Only the large airborne particles can be seen, but the invisible particles do most of the real damage. They can irritate allergies, soil windows and drapes, and leave a dingy haze behind mirrors and pictures.

The Honeywell unit traps particles so tiny that it would take about 7,000 of them to stretch across this (\cdot) dot!

In a new home, the Honeywell Electronic Air Cleaner may be included in the mortgage for under \$2.00 per month.

For more complete information and literature, write Honeywell, Dept. HH8-423, Minneapolis, Minn. 55408. *As measured by the National Bureau of Standards Dust Spot Method.







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110



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How Float-Away Closet Systems can help you attract and hold apartment tenants

ADDED SPACE: Float-Away doors permit full-depth shelves and addition of an extra top shelf, increasing space as much as $\frac{1}{3}$. Allowing complete access to closets.

LOWER COSTS: Door frames unnecessary, wall-to-wall, and floor-to-ceiling, installed at about 75¢ a square foot compared to \$1 or more for the average wall partition.

FLEXIBILITY UNLIMITED: To meet the architect's and builder's problems, Float-Away steel closet door systems are available in *any* height, any width in one inch increments.

We want your closet door business!

We welcome direct inquiries from makers of manufactured homes.

A few choice territories are open for qualified dealers.

Write or phone for full information: FLOAT-AWAY DOOR CO. 1173 Zonolite Road, N. E., Atlanta 5, Georgia Dept. H-866 AND London-Lenscrete Ltd. Queen's Circus, London S. W. 8, England



Space a problem for heating and cooling?

Take a look at General Electric's all-electric approach:



For homes and garden apartments.

The new quiet, ultra compact G-E electric furnace. Only 36" high in upflow or downflow models - smallest units only 15" high, installed horizontally. ULapproved for zero side clearances in closets, utility rooms, alcoves, basements or ceiling suspension. Couples with an equally compact G-E top-discharge outdoor unit. Attractive woodhue color.

For high-rise apartments.

The new TA-K flush-mount condenser, tied in with new G-E (10" or 14" high) air handlers, provide central air conditioning with no loss of floor space. (Snap-on electric heating optional.) At the same time, it permits individual unit control and power metering. Air handlers mount in closets or in furred-down ceilings.

> Your one source for every air conditioning and heating need.



In its complete line of heating and cooling equipment, General Electric offers you unequalled freedom in design and very low installation cost. Of particular space-saving interest to the builder is the extreme compactness of all units—furnaces, air conditioning, heat pumps and boilers. For full details on any heating or cooling equipment, contact your G-E distributor. Or write directly to Air Conditioning Dept., AP6-208, Louisville, Kentucky.

NEW PRODUCTS

For more information, circle indicated number on Reader Service card p. 117.



Resilient tile for outdoor floors—but be sure it's laid according to the instruction sheet

Specifically, this new vinyl composition—in $12" \times 12"$ squares—must be applied over a neoprene primer plus a heavy-duty neoprene contact adhesive (*photos right*). Tests show that the resulting bond will withstand temperatures as high as 150° F and as low as 40° below zero. Tests also show that prolonged exposure to sunlight causes the tile colors—dark green, beige, slate gray or terra cotta—to fade only slightly. Don't try to install the tile over wood. It's strictly for structurally sound and well-drained concrete slabs. Also, do the job on a day when the temperature is between 70° and 90° F. Why cover a patio with tile? Because, says the manufacturer, it outlasts paint; costs less than flagstone, brick or ceramic tile; and is easier to maintain than outdoor carpet. Armstrong, Lancaster, Pa. Circle 250 on Reader Service card



1. Neoprene adhesive is roller-applied over neoprene primer.



3. First tile is laid on point marked at center of job layout.



5. Each tile must be thoroughly pressed down with hand roller.



2. Adhesive is applied to back of tile with a 3" trim roller.



4. Metal spacers leave 1/16" contraction joint between tiles.



6. Excess tile at edges can be cut with sharp linoleum knife.



These featherweight septic tanks take the lifting work out of installing a septic system

Made of reinforced fiberglass, the 300-gallon model sitting on the Volkswagen weighs only 125 lbs. Yet, in a test at Lehigh University, it withstood a 13,000-lb. crushload exerted by a 100-ton press.

Both the spherical and cylindrical models are shipped in two halves and—for storage economy—the halves can be nested together. At the job site, the halves are joined and sealed with a tube of silicone rubber cement and pop rivets.

In addition to the tanks' extremely light weight, the manufacturer claims two additional advantages: 1) the rounded design compensates for excess tipping or leaning in case of ground settlement, and 2) a plasticized liner makes the tanks impervious to chemical attack. Available sizes are: 300, 500, 750, 1,000, and 1,250 gallons.

The tanks are also available with built-in aeration equipment that permits them to operate as small-scale sewage-treatment plants discharging into streams. Cromar, Williamsport, Pa. Circle 251 on Reader Service card

Interiors_



A motorized Murphy bed—build it into any wood-paneled wall as a bonus sleeping area

A $\frac{1}{4}$ h.p. geared-drive electric motor—operated by a wall switch—makes the bed go up or down. The motor is attached behind the headboard and a spur gear on the motor shaft travels along a gear sector attached to the stud supporting the bed (*drawing*). Limit switches stop the bed automatically in the up and down positions, and the system is protected by a fuse plug.

Conventional box springs and mattress are included with the unit, which comes preassembled or knocked-down in kit form. The builder attaches his own wall paneling to the footboard and bottom of the bed.

Framing requirements: a space 61" wide and 16" deep, including a 2"x6" stud on each side of the bed. Minimum ceiling height: 7'8". Practical Products, Danville, Va. Circle 226 on Reader Service card









Textured travertine panel simulates the surface detail and color of marble. It is offered in 16"x8' tongue-and-groove planks as well as in 4'x8' square-edged panels ¼" thick. Matching moldings are available. Marlite, Dover, Ohio.

Circle 222 on Reader Service card



Plastic decorator panels— 24"x72"—are inserts for room dividers, windows, and screens. Opaque paint accents raised Moorish design in choice of: black on red, terra cotta on amber, turquois on olive. K-S-H Plastics, St. Louis. Circle 224 on Reader Service card

Prefinished wall paneling comes in natural red and antique birch color tones, with a bold-planking effect of mismatched grain and colored grooves. The 4'x7' or 8' panels come in two thicknesses—3/16'' and 1/4''. Boise Cascade, Minneapolis. *Circle 225 on Reader Service card*



Rigid vinyl baseboard snaps onto a row of nailed-on clips, producing a nail-free surface that needs no painting. Also available: vinyl door and window trim. Four door-jamb sections adapt to three wall thicknesses. Crane, Columbus, Ohio. *Circle 223 on Reader Service card*

New products continued on p. 122


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NEW PRODUCTS start on p. 119

Exteriors_



Three new solid vinyl clapboards offer improved thermal insulation and fastening methods

Double-6" clapboard—the style shown at the left above—is two 6" clapboard exposures extruded on the same panel. A layer of foam polystyrene insulation is factory-cemented to the back of the panel—in place of the separate fiber backerboard that the manufacturer previously supplied as insulation and which had to be inserted in the field. Double-6" comes in 10' lengths in white, green, and gray. Other styles available: double-4", and double8". Bird & Son, East Walpole, Mass. Circle 231 on Reader Service card

The 6"-wide solid-vinyl clapboard shown in the center photo above promises flexible installation. It is applied by means of a nailing tab designed to function as a built-in spring for secure suspension of the siding. The manufacturer says the cost is closely competitive with non-plastic clapboards. Only one color is available: white. Monsanto, St. Louis. *Cir*- cle 232 on Reader Service card

Vinyl clapboards incorporating T-Lok shown in the drawing at the right above—can be installed either as hollow-backed panels or with drop-in backerboard. The interlocking system provides rigid self-aligning of panels but permits expansion and contraction during temperature changes. Exposure is 8", shadowlap is 3/4". Mastic Corp., South Bend, Ind. *Circle 233 on Reader Service card*



Lap siding—¾" thick, 12" wide, and 16' long—has contour edge for shadowline accent, and nailing guides. The siding—the manufacturer's lower-priced line —is factory-primed and backsealed. It is packaged six to a bundle. Masonite, Chicago. *Circle 228 on Reader Service card*



Striated aluminum siding incorporates a self-aligning snap lock for precise interlocking. The 8" horizontal lap panels are coated with fire baked acrylic enamel paint. Colors include green and sandalwood. U.S. Aluminum, Franklin Park, III. *Circle 227 on Reader Service card*



Pre-cut red cedar fence— 5'4" high—has 2' top trim consisting of horizontal basketweave slats. Also available: a 6' version with only two horizontal boards. Support posts and pregrooved 8' rails are packaged separately. Potlatch, San Francisco. *Circle 230 on Reader Service card*



Redwood bevel siding with rough-sawn texture is available in two prefinished stains—red brown, and driftwood grey—and in natural redwood finish. Widths: 6", 8", and 10". Lengths: 3' to 20'. Butt thickness: 5%". Simpson Timber, Seattle. *Circle 229 on Reader Service card*



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You have a piece of Thermopane[®] insulating glass.

It's made by our GlasSeal® process which fuses glass to glass. This gives us, in effect, a skinny, sealed bottle. We do this to keep the dry air

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Thermopane with the GlasSeal edge is available for practically all sizes and styles of windows you use, big, small or in-between. (Leading wood window manufacturers already offer it as a standard option.) Get windows with a bottle built in. The kind with dry air inside. Put them in your homes. They're money-makers. Especially with the name Thermopane in the corner.

Shermopane by



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Office equipment



Electronic billing/accounting machine—with typewriter-style console, work area panels at each side, and plug-in solid state computer —occupies less space than an average office desk. Olivetti-Underwood, New York. Circle 206 on Reader Service card



Table-top offset duplicator handles copy as large as 13"x 17¼" and features a nine-roller inking system. The machine can process up to 7,500 impressions per hour. A smaller model takes 9½"x13" copy @ 4,500 impressions. A. B. Dick, Chicago. *Circle 209 on Reader Service card*



Vertical plan file for drop-lift filing conceals binders of lightweight aluminum. An optional table adds additional work surface and folds flat against the unit for compact storage. Heavy duty casters provide mobility. Plan-Hold, Torrance, Calif. *Circle 210 on Reader Service card*



Heat transfer copier makes its own spirit masters from any typed, written, or printed sheet up to $8\frac{1}{2}$ "x14", as well as dry copies. The machine— $4\frac{1}{2}$ "x12³4"x16³4"—is finished in beige baked enamel and chrome. Copy Rite, Chicago. *Circle 207 on Reader Service card*



Drawing board device holds 28"x40" board which, when mounted on a desk, can be moved to a vertical position (left) to leave the desk top free. Releasing a brake lets board be pulled into drawing position. Kuhlman-Impex, Houston. *Circle 208 on Reader Service card*



Electric paper cutter takes paper up to 21" wide and cuts over a ream at one stroke. It shuts off automatically after every cycle for safety and economy and comes with a one-piece metal stand 341/s" high. Michael Lith, New York.

Circle 211 on Reader Service card



T-square converter fits any T-square and drawing-board combination. A spring-tensioned nylon roller holds the head of the square against the edge of the board for drawing, and can be relaxed or tightened. Hoyle Engineering, Barstow, Calif. *Circle 212 on Reader Service card*



Automated thermocopier can be controlled to make any number of copies without altering the dial setting. It features three starting speeds: low, medium, and high. Cylinder circumference is $8\frac{5}{8}$ ". Weight: 27 lbs. ABM Business Automation, New York. *Circle 214 on Reader Service card*



Single-lamp printer is designed for limited print volume. Unit is lightweight (37 lbs) and portable, and can be placed on a desk or wall-mounted. One dial control switches to print or sepia with no warm-up. Reproduction Engineering, Essex, Conn. *Circle 215 on Reader Service card*

"We save 50 man-hours a week"

"We use our Ford 4400 tractor and 735 loader to unload soil pipe—one trailer-truck in 15 to 30 minutes. Previously, it took seven men three hours to do the same job," says Richard Perotti, H. A. Perotti, Inc., Bristol, Pa.

"Ford 4400 and 753 backhoe has enabled us to increase our business ten per cent," Mr. Perotti continued. "With it, we can dig 887 feet of 4-foot trench in $6\frac{1}{2}$ hours. Backfill 50 feet every ten minutes."

Ford 4400 can save you the cost of additional equipment as well as time and labor costs. The 2,500-lb capacity loader lifts to a height of ten feet six inches. Breakout force is 3,770 lbs . . . bucket roll-back 22 degrees. Large backhoe lift and crowd cylinders—with in-line placement—give outstanding yardage-producing ability and deep hole digging power.

Ford 4400 has power and strength to match its versatility. Heavy-duty, fuel-thrifty diesel or diesel-strong gasoline engine. Oil-immersed multiple disc brakes. Heavy industrial front axle and support assembly. Work-speeding transmissions: manual reversing, dual range eight-speed, and powershift ten-speed.

Look over a Ford 4400 tractor-loader-backhoe soon at your Ford tractor dealer's. Put its power, speed, and versatility to work—adding to your profits and your production.





Hardware



Cabinet hardware is designed to blend with Spanish decor. The set of knobs, pulls, rings, and backplates is available in solid pewter with an antique finish and in solid brass with assorted finishes. Kingsley Brass, Roosevelt, N. Y. *Circle 216 on Reader Service card*



Sliding-door pull assembly includes flush-mounted exterior pull and interior pull with latch and adjustable keeper. The cast zinc pulls—7¹/4" long—are finished in satin silver baked-on enamel and polished chrome. Amerock, Rockford, Ill. *Circle 217 on Reader Service card*



Metal sash balance and weatherstrip incorporates block and tackle plus two counterbalanced springs and pulleys per sash. Lock stops at top and bottom simplify installation. Finishes: gold, silver, coppertone, and white. Zegers, Chicago. *Circle 221 on Reader Service card*



Door closer in three finishes—brushed brass, brushed aluminum, and white enamel—comes with three interchangeable motif strips that match or contrast with wood grain. Can be installed inside or outside door. Shelby Corp., Shelby, Ohio. *Circle 219 on Reader Service card*



Door knob is available with all the manufacturer's standard interior locksets in the medium-price range. The tulip-shaped knob with rose design is styled to complement contemporary decor. Arrow Lock, Brooklyn, N.Y. *Circle 275 on Reader Service card*



High security locksets have keys with milled hollows that can only be duplicated by the manufacturer, and only owners can order duplicates. The unusual key configuration makes the lock virtually burglar-proof. Sargent Hardware, New Haven, Conn. *Circle 276 on Reader Service card*



Cabinet lock uses the manufacturer's standard key. The lock is offered in brass or bronze with either a 1" or a $1\frac{1}{2}$ " throw. There is a six-pin model for a $1\frac{1}{8}$ " door and a five-pin model for a 1" door. Schlage Lock, San Francisco. *Circle 277 on Reader Service card*



Joint clamp of ten-gauge wrought steel joins and levels plastic tops without glue, shims, dowels, or splines. The locking bolt exerts even pressure at the top and bottom edges of the joint so countertop can't bend. Engineered Products, Flint, Mich. *Circle 220 on Reader Service card*



Matched cabinet hardware with Mediterranean motif comes in medieval copper, medieval brass, satin black, and antique silver. The line adapts to cabinets, linen closets, wardrobes, and closet doors. Hyer Hardware, Anaheim, Calif. *Circle 218 on Reader Service card*



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Circle 79 on Reader Service Card



The new Blu-Ray model 142 whiteprinter copies anything typed, written, drawn or printed on translucent or semiopaque materials up to 42" wide by any length. Makes foils and sepias, and does anything larger, costlier machines can do. It features a troublefree electronic speed control. And it's so compact it fits on any table or hangs from any wall. In short, it's an amazing value: Try it in your office, free. Slightly higher west of the Rockies.



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Low-priced radio-intercom comes packaged with master panel, three room speakers, one door station, wire, and rough-in materials, and can handle three more speakers. Calls can be made from speakers while radio is on. Rangaire, Cleburne, Tex. Circle 205 on Reader Service card



Load centers with circuit breakers offer a better-designed front with 1) all edges beveled and rounded, 2) a set-in flat door, and 3) all box connectors concealed. Sizes are available for two to 40 circuits. I-T-E Circuit Breaker, Philadelphia.

Circle 203 on Reader Service card



All-weather vinyl tape can be applied in sub-freezing temperatures and will also withstand excessively high temperatures up to 176°F. It is sold at standard electrical-tape prices in 3/4"x66' rolls. General Electric, Schenectady, N.Y.

Circle 204 on Reader Service card



Wall-mounted radio, combined with an independent duplex receptacle or a switch-receptacle combination, is for kitchens and bathrooms. Face plate is same size as a standard three-gang wall plate. In ivory or brown. Rodale, Emmaus, Pa. Circle 202 on Reader Service card

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Circle 80 on Reader Service Card

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Heating, cooling, ventilating



Dual-cabinet air-conditioner for room cooling mounts in a window but permits the sash to open and close to within 2" of the sill. Installation includes a foam-rubber sealer. Six models: 5,800 to 16,000 Btuh. Dearborn Stove, Dallas. *Circle 260 on Reader Service card*



Plastic air-conditioner case is the first structural use of polycarbonate resin in major appliances. Advantages: no rust, no sweating, light weight. The case above houses a 5,000-Btuh room unit weighing 59 lbs. General Electric, Louisville. *Circle 261 on Reader Service card*



Power ventilator for exhausting attic heat operates by thermostat. Low-profile roof housing— $8\frac{1}{2}$ " above shingles—is made of white plastic which can be painted to blend with roof. Capacity: 1,400 cu. ft. per min. Butler Eng., Mineral Wells, Tex. *Circle 262 on Reader Service card*



Under-cabinet radiator — 4"x18"x21"—is mounted horizontally at floor level. Ideal uses: bathroom and kitchen remodeling. The unit delivers over 8,000 Btuh at 180° water temperature. Motor and blower are completely isolated. Beacon-Morris, Boston. *Circle 263 on Reader Service card*

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NEW PRODUCTS

start on p. 119

Ceilings



Textured acoustical ceiling comes in steel and anodized aluminum in a wide range of patterns and perforations. Twenty-six gauge steel pan is recommended for most interiors, 20-gauge for high-abuse areas. Hauserman, Cleveland. Circle 236 on Reader Service card



Acoustical metal pan system combines gypsum board backing with standard pan assembly. Uses either 1/2" long-length gypsum lath or wallboard. Noise reduction coefficient range: .75 to .85. National Gypsum, Buffalo, N.Y. Circle 234 on Reader Service card



Vinyl-surface metal beam can be snapped into place over main or cross tees in ceiling suspension systems, or installed on plaster, gypsum board or tile ceilings. Dimensions: 21/4" wide, 3" deep, 12' and 4' long. Finish: walnut. Celotex, Chicago. Circle 237 on Reader Service card



Suspended ceiling panel comes in 2' square and 2'x4' sizes. The nonacoustical lay-in panels feature an intricate tan fissured design. The new panel has been added for the lower priced suspended ceiling market. Armstrong, Lancaster, Pa.

Circle 235 on Reader Service card New literature starts on p. 134



the feature that melts snow...sells more homes

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Ashley Oaks Apartments, Atlanta, Georgia. This 228-unit garden type apartment is comfort conditioned by individual York Flex-O-Metic[®] air conditioners, combined with Borg-Warner electric furnaces. Owner and General Contractor, C and A Land Company; Architect, Van Fraser, A.I.A.; Mechanical Contractor, General Heating and Air Conditioning Company; Plumbing Contractor, General Mechanical Corporation.

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For more facts, contact your nearby York Dealer. Or write York Corporation, subsidiary of Borg-Warner Corporation, York, Pennsylvania. In Canada, contact National-Shipley Ltd., Rexdale Boulevard, Rexdale, Ontario.

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Majestic contemporary wood-burning fireplaces

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The Majestic Company, Inc. 413 Erie St., Huntington, Ind.,46750

NEW LITERATURE

For copies of free literature, circle the indicated number on the Reader Service card, page 117.

METAL COATING. Cost and performance of fluoropolymer enamel are compared with other products used to pre-coat metal building components. Eight-page brochure. Du Pont, Wilmington, Del. Circle 355 on Reader Service card

HOT WEATHER CONCRETING. The important steps to follow before, during, and after placing concrete during hot weather are outlined on a placard. Master Builders, Cleveland. *Circle 313* on Reader Service card

WHOLESALE BUILDING MATERIALS. Mail order firm's 168-page annual catalog features a free freight offer on large orders. Weldwood siding, folding doors, room dividers, and builtin vacuum cleaning systems are among new products included. Morgan-Wightman, St. Louis, Mo, Circle 314 on Reader Service card

SUBTERRANEAN TERMITE CONTROL. Manual includes FHA specifications for termite control in slab-on-ground and basement or crawl space construction. It tells how to choose the necessary equipment, prepare the emulsion, and select the chemical. Velsicol Chemical, Chicago. Circle 311 on Reader Service card

HOME LIGHTING. Interior designer's sketches present new lighting ideas for landscapes, entrance doors, foyers and rooms. For a copy send 25ϕ to: Progress Manufacturing Company, Dept. "H", Philadelphia, Pa. 19104.

ALUMINUM SWIMMING POOLS. Brochure discusses performance of aluminum in swimming pool construction, and describes use of the metal in diving boards, coping systems, ladders, fencing, and other accessories. Alcoa, Pittsburgh. *Circle* 346 on Reader Service card

HARDBOARD SIDING. Revised catalog of 24 pages describes manufacturer's line and tells how and where to apply it. Illustrations include soffits, ceilings, fences, patio walls, and corner, door, window and joint details. Masonite, Chicago. *Circle 348 on Reader Service card*

wood stains. Product folder in full color shows manufacturer's stains in two formulas: semi-transparent and heavy-duty opaque. Color charts and application suggestions are included. Shakertown, Cleveland. Circle 308 on Reader Service card

UNDERLAYMENT. Brochure—with illustrations and cutaways—enumerates advantages of hardboard panel designed for use under resilient floor coverings such as linoleum, asphalt, cork and vinyl tile, and carpeting. Detailed installation procedures are given. Masonite, Chicago. *Circle* 309 on Reader Service card

wood CABINETS AND VANITIES. Full-color brochure shows kitchen installations of manufacturer's colonial cherry and natural birch line. Vanities are shown in white with gold molding, and also in cherry and birch. H. Willett, New Albany, Ind. Circle 305 on Reader Service card

VACATION HOMES. Twelve views and plans for second homes from seashore shelters to mountainside chalets and year-round homes. Standard door, window, and lumber sizes are used to a maximum for simple, economical construction. Western Wood Products. Portland, Ore. *Circle* 302 on Reader Service card

A Marketing Plan for Home Builders and A Marketing Plan for Apartment Builders, reported in last month's New Literature, are now available only through salesmen of Allied Chemical's Barrett Division—not by using HOUSE & HOME's Reader Service number.

CONCRETE FORM BOARD. Wall column, deck and beam applications are discussed and illustrated in a four-page brochure which tells how to nail and space form lumber, and how to oil, pour, and remove forms. Detailed graphs and tables on allowable concrete pressures and maximum support spacing are included. Masonite, Chicago. Circle 349 on Reader Service card

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MDO (Medium Density Overlaid) lapped plywood



MDO plywood on a branch bank



Rough sawn plywood, reverse board & batten



Rough sawn redwood plywood



Coated plywood and batten



Texture One-Eleven horizontal



Rough sawn kerfed plywood



These new plywood sidings will help a lot of builders win design awards in 1966. They'll help even more builders save money.

ST.

Today's distinctive plywood sidings give the unmistakable look of quality to many a \$50,000 home. But they make just as much sense on the lowbudget house. Plywood goes up fast and can be applied directly to studs, eliminating sheathing. And now it comes in dozens of styles, textures and finishes. We had room to show only eight here. But you could use plywood on every house in a 40-house tract and no two would look alike. What more could you ask? Color pictures, specifications, manufacturers' names? Send the coupon.

(They can help you do both.)

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Address	specialty sidi	ngs and coatings.	
		State	Zip

Circle 87 on Reader Service Card

NATION

Important news about Armstrong floors from NAHB Research House VI

The use of Armstrong floors in the new NAHB Research House in Washington, D. C., illustrates some important, new innovations which can add both installation efficiency and customer appeal to today's new homes.

1. New comfort and quiet. The flooring used in the bedroom shown opposite and in other rooms of the second floor of the NAHB House is



Women's spike heels won't dent Cambrian.

Armstrong Cambrian Vinyl Corlon. Cambrian is the most comfortable vinyl floor Armstrong has ever made. It has the exclusive Armstrong Cushioncord Back, a thick layer of foamed vinyl beneath the tough vinyl surface. Cambrian gives underfoot and then comes right back when pressure is released. But for all its light-footed comfort, Cambrian is also as tough as any floor Armstrong ever made for the home. Even spike heels won't dent it. Cambrian's foamed vinyl back reduces both the noise of footsteps in a room and noise transmitted to the room below.

This new floor has a pebbly, textured surface, comes in eight decorator colorings, and can be installed at any grade level.

2. Sealed seams in sheet vinyl. Using an efficient, new Armstrong installation system called Securabond, the installer can seal the seams in Cambrian. The floor is bonded at the seam from top to bottom, completely waterproof, and easier than ever to keep clean. You can offer prospects a written Armstrong guarantee with Cambrian, too. It covers both the material and installation when done by an approved Armstrong retailer. It's a useful sales extra.

3. Timesaving, new installation technique. In the entranceway, dining room, and living room of the NAHB House, the slate design in Coronelle Vinyl Corlon was installed by another new Armstrong installation system called Perimiflor. With this technique, adhesive is applied only to the perimeter of the floor area, at seam lines, and around fixtures. Installation is simpler, fast-

VINYL FLOORS BY

er, and more convenient because it's not necessary to cover the entire floor area with adhesive. Coronelle was used here to give the luxury appeal of slate, without the high cost and installation difficulties.



Random chip design of Montina Vinyl Corlon.

Montina Vinyl Corlon was installed in the research house kitchen and family room with the same new timesaving Perimiflor installation technique.

Your Armstrong Architect-Builder-Contractor Representative can give you more information about these and other new products from Armstrong. Call him, or write: Armstrong, 308 Sixth Street, Lancaster, Pennsylvania.

Armstrong



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